

**KNOWLEDGE, ATTITUDE AND PREVALENCE OF CIGARETTE
SMOKING AMONG PUBLIC SECONDARY SCHOOL STUDENTS IN
IBADAN NORTH LOCAL GOVERNMENT AREA,
OYO STATE, NIGERIA**

BY

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ABSTRACT

Cigarette smoking constitutes a major threat to the health and wellbeing of teenagers. Anecdotal reports gleaned from concurrent field work activities shows that the practice is on the increase among in-school adolescents in Ibadan North Local Government Area (IBNLGA). However, information relating to the knowledge and smoking behaviour among these secondary school students in IBNLGA has not been systemically documented. This study was therefore designed to investigate the knowledge, attitude and prevalence of cigarette smoking among public secondary school students in Ibadan North Local Government Area of Oyo state (IBNLGA), Nigeria.

This was a cross-sectional study design targeted at 349 secondary school students selected from seven public secondary schools in IBNLGA using a three-stage sampling method. A pre-tested, semi-structured, interviewer-administered questionnaire was used for data collection on the socio-demographic characteristics, knowledge on the dangers of cigarette smoking, factors influencing smoking behaviour among secondary school students, prevalence as well as attitude of the students towards cigarette smoking. Knowledge of students was assessed using a 16-point scale and scores were categorised as good (≥ 8) points and poor (< 8) points while attitude of students towards cigarette smoking was assessed using a 12-point scale and scores were categorised as positive (≥ 6) points and negative (< 6) points. The data were analysed using descriptive statistics and Chi-square test at $p \leq 0.05$ level of significance.

The mean age of the respondents was 14.7 ± 2.4 years, 61.9% were Males, 64.5% were Christian and 53.9% were 15-19 years. Majority (72.8%) of the respondents had good knowledge. Most (95.1%) of the respondents perceived cigarette smoking to be dangerous to their health while 67.9% of respondents correctly mentioned nicotine as a constituent to a cigarette. Eighty-five percent (84.5%) of the respondents had positive attitude towards cigarette smoking. Many (48.7%) of the respondents were influenced by their peers to indulge in smoking while 59.9% of the respondents were influenced by their parents' smoking behaviour. The prevalence of cigarette smoking among ever smoked was 32.1%; most (97.3%) of the ever smokers were current smokers. More male students (83.9%) smoked

cigarette compared to female students (16.1%). Self-reported prevalence of cigarette smoking was higher among respondents aged 13-15 years. There was a significant difference in respondents' knowledge on the dangers of cigarette smoking and area of residence, family type and family size. Similarly, there was a significant difference between the age of the respondents and their attitude towards cigarette smoking. In addition, there was a significant difference between the sex, age, area of residence, mother's level of education, family size of respondents and prevalence of cigarette smoking among respondents.

The prevalence of cigarette smoking was low among public secondary school students in Ibadan North Local Government Area. The student had good knowledge on the harmful effects of smoking and a positive attitude against cigarette smoking. Peer and parental influence were the major determinant of the behaviour. Peer education, school based enlightening activities and other co-curriculum performances are needed to discourage the in-school adolescents who still engage in cigarette smoking.

Keywords: Cigarette smoking, current smoker, Ibadan North Local Government, teenagers

Word counts: 493

DEDICATION

This research project is dedicated to the Almighty God and all the 349 consenting secondary school students that participated in this study.

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CERTIFICATION

I hereby certify that this study was carried out by Adijat Olabisi, ELIAS under my supervision in the Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, Nigeria.

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LIST OF ABBREVIATIONS

CDC	- Center for Disease Control
GATS	- Global Adult Tobacco Survey
GYTS	- Global Youth Tobacco Survey
HPE	- Health Promotion and Education
IBNLG	- Ibadan North Local Government
IBNE	- Ibadan North East Local Government
LGA	- Local Government Area
NDHS	- National Demographic Health Survey
NPC	- National Population Commission
SPSS	- Statistical Package for Social Sciences
WHO	- World Health Organization

OPERATIONAL DEFINITIONS

Ever Smoked: an ever smoked was defined as the one who has ever smoked cigarette before the study.

Current Smoker: a current smoker was defined as the one who had smoked cigarette in the last 30 days preceding the study.

Secondary school students: these are students in public secondary schools as regards to this study

CHAPTER ONE

INTRODUCTION

1.1 Background to Study

Tobacco is a product prepared from the leaves of the tobacco plant *Nicotiana tabacum* (World Health Organization, 2008). It contains a stimulant; alkaloid nicotine which has resulted in the widespread use and acceptance among adolescents and adults. Tobacco smoking remains a major public health concern particularly among young people (Odukoya, Odeyemi and Oyeyemi, 2013). Every year, tobacco is responsible for the deaths of an estimated 6 million people and is associated with one in ten adult deaths worldwide (Erickson, Mac and Ross, 2017). Of these deaths, 75% occurs in middle and low-income countries where more than 80% of the world's smokers live, including Nigeria (WHO, 2017). By 2030, the death toll from tobacco use is estimated to reach over 8 million deaths and 1 billion deaths in the 21st century if unchecked (Petrol and Lopez, 2017).

Cigarette smoking has been referred to as the active use of one or more manufactured or hand-rolled tobacco cigarettes per day either purchased or home grown thus, smoking is an active behaviour which involves intentional or unintentional inhalation of tobacco smoke (Trading Economics, 2010). It is the commonest form of tobacco use in developed countries accounting for at least 80% of overall tobacco consumption (WHO, 2017a). It contains nicotine, a highly addictive substance with about 80,000 to 100,000 young people around the world becoming addicted to tobacco each day (American Cancer Society, 2013).

Cigarette smoking is a health risky behaviour which contributes to the leading causes of global death and disability among adults and youths as well as educational and social problems (Schwartz, Forthun and Ravert, 2010; Centers for Disease Control and Prevention, 2009a). According to World Health Organization, 1.1 million people; representing one-third of the world's population above the age of 15 use tobacco particularly in form of cigarette. Of this 1.1 million people, 700 million of them are males living in developing countries. It is estimated that 100 million deaths occurred globally due to tobacco smoking. Equally, tobacco smokers are believed to lose one decade of their life expectancy than those who never smoked (WHO, 2012).

In spite of efforts aimed at reducing habit of smoking, smoking is still high in many parts of the developing world especially Africa and Asia (WHO, 2011). There are conflicting evidences on the actual prevalence of cigarette smoking in Nigeria. A study on cigarette smoking by the Pharmaceutical Students in Lagos Nigeria shows that smoking prevalence among Nigerian youth to be 5.5% (Khanal, Adhikari and Khaki, 2013).

According to the Nigeria Demographic Health Survey (2013), 0.7% of adults aged 15 – 19 years and 9% of adults aged 15–49 years smoke cigarette and 6.3% of secondary school students used cigarette (NPC and ICF macro, 2014). A more recent Global adult tobacco survey (2012) found that 4.5 million (5.6%) adults aged 15 years and above smoke cigarette where 10% of them were men and 1.1% of them are women while 6.4 million (29.3%) of adults were exposed to second hand smoke during visit to public places. However, this report has shown that smoking prevalence among adolescents and young adults in Nigeria is on the increase as compared to many developed countries (Drope, 2012).

Smoking among adolescents are usually due to race, peer influence, family influences, media (portraying people who smoke cigarettes as sophisticated, sexy, manly in movies), poor academic performance, curiosity, drive for experimentation, psychological factors which includes emotional problems such as low self-esteem, frustration, insecurity, anxiety, restlessness (Ebrahimi, 2014; Yan, 2014; Karimy, 2013; Nazarzdeh, 2013; Schaefer, 2012; Voorhes, 2011). Although anyone who uses tobacco can become addicted to nicotine, people who do not start smoking before age 21 are unlikely to begin smoking (USDHHS, CDC and NCCDPHP, 2012). The earlier the age of smoking initiation among youth, the more likely it is that they become regular smokers and the less likely they are to quit (Khuder, Dayal and Mutgi, 2008). The health risks from early onset of smoking are particularly severe and smoking in youth overwhelmingly leads to smoking in adulthood (Bachman, Wadsworth, O'Malley, Johnston and Schulenberg, 2011).

1.2 Problem Statement

Cigarette, a highly addictive substance containing nicotine is the most prominent form of tobacco used world- wide and its use is fast growing in developed and developing countries (Mackay and Erikson, 2011). In Nigeria, it is estimated that 4.5 million are tobacco addicts (National Bureau of Statistics, 2013). It is reported that tobacco is the second most

commonly used substance with life time prevalence of 47.7% (Chukwujekwu, 2017). Smoking of tobacco appears to be a well-entrenched behaviour among teenagers.

Adolescence is a period of transition thus most adolescents engage in risky behaviours including smoking. Studies have shown that most health risky behaviours are mostly acquired during adolescence and reflect on to adulthood. This period is seen as a forming stage; a resistant period where young people tries to form their own identity and also try to belong to a particular stratified social group. As the adolescent years represents a critical period for the initiation of substance use including tobacco, the health risk of early onset of smoking are particularly severe and this could lead to smoking in adulthood. Several researchers have also reported that cigarette may be the first drug to be used by adolescents in a sequel that may include alcohol, marijuana and hard drugs (Ekanem, 2009). It is estimated that 80% of adult regular smokers' initiate tobacco use before the age of 18 (Poynter, 2008).

In Nigeria, adolescent smoking rates are considerably lower than in many developed countries, however these rates appear to be increasing over time. In 1994, the smoking rate among Nigerian youth was 4.4% (WHO,2014). According to the Lagos State Global Youth Tobacco Survey (2008), the smoking prevalence among children aged 13-15 years was as high as 11.4% among males, while 16.2% of never smokers; the study also reported that they were likely to initiate smoking within the next year (Ekanem, 2009; Akinbode, 2008). The WHO reports also show the prevalence of cigarette smoking among adolescents between the ages of 13-15 to be 3.5% (WHO, 2014b).

Cigarette smoking cuts across all social classes including the rich, poor and young boys and girls. However, initiation of tobacco in teenagers is usually due to interaction of different factors which includes interpersonal, intrapersonal and environmental factors. Studies have also peer pressure and having friends who smoke has been considered the most important factor influencing the habit of smoking in adolescents in western worlds (Schaefer, Haas, Bishop, 2012). Some intrapersonal factors associated with adolescent smoking includes lower level of knowledge on hazards of smoking (Yan, Jacques- Tiura, Chen, 2014). However, research as shown that many young Nigerians are unaware of the grave dangers of cigarette smoking.

A study among students in the south west showed that only 57 per cent knew smoking was harmful to health and only 39 per cent had been taught about the harmful effects of smoking in the school teaching program (Omokhodion and Faseru, 2007). The knowledge of the specific harmful effects of smoking was also found to be low. Another study among students in a similar setting revealed that up to 40 per cent of students were unable to identify smoking as a risk factor for lung cancer (Osungbade and Oshiname, 2008). Less than half of the students surveyed in the 2008 GYTS in Lagos State had been taught in school about the dangers of tobacco smoking (Ekanem, 2010). Even though studies have been carried out in Nigeria on cigarette use among secondary school students, most of these studies have been carried out in other parts of Nigeria but there is a dearth of information in Ibadan North Local Government Area region of Nigeria.

Research also shows that adolescents who smoke are more likely to be involved in deviant and self-destructive behaviours (Boriffice, 2006). Furthermore, various researches done in Africa, including Nigeria shows that adults behavioural patterns including smoking started from secondary school and they constitute the major health problems of secondary school students (Martin, 2011).

Therefore, this study aims at assessing the knowledge and attitude as to why secondary school students use cigarette in Ibadan North Local Government Area (IBNLGA) Oyo State.

1.3 Justification of Study

In lieu of the fact that adolescents are known to indulge in risky behaviours including smoking which consequently exposes them to the health risk of early onset of cigarette smoking and its associated practices, their knowledge and use of cigarette is of utmost pertinence and importance. There are several studies on knowledge, attitude and perception as it relates to cigarette smoking in Nigeria including those focusing on adolescents, secondary school students and undergraduates in the community. Hence, it is imperative to explore the knowledge and use of cigarette among the secondary school students in IBNLGA of Oyo State, Nigeria in order to identify knowledge gaps and misconceptions.

The study will also help to understand the pattern of cigarette use among secondary school students and the factors influencing its use. Furthermore, it will serve as need assessment

for policy formulation on the current prevalence of cigarette smoking among adolescents and prevention of early onset of smoking related diseases among them.

1.4 Research Questions

1. What is the level of knowledge of public secondary school students in IBNLGA about the dangers associated with cigarette smoking?
2. What is the attitude of public secondary school students in IBNLGA towards cigarette smoking?
3. What are the factors responsible for smoking among public secondary school students of IBNLGA?
4. What is the prevalence of cigarette smoking among public secondary school students in IBNLGA?

1.5 Research Hypotheses

1. There is no significant difference between the respondents' socio-demographic characteristics and their knowledge on dangers of cigarette smoking.
2. There is no significant difference between the respondents' socio-demographic characteristics and their attitude towards cigarette smoking.
3. There is no significant difference between respondents' socio-demographic characteristics and prevalence of cigarette smoking among secondary school students in IBNLGA.

1.6 Broad Objective

The broad objective for this study was to investigate the knowledge, attitude and prevalence of cigarette smoking among public secondary school students in IBNLGA, Nigeria.

1.7 Specific Objectives

1. To determine the knowledge of public secondary school students in IBNLGA on dangers associated cigarette smoking.
2. To assess the attitude of public secondary school students in IBNLGA towards cigarette smoking.
3. To determine the factors responsible for cigarette smoking among public secondary school students of IBNLGA.
4. To determine the smoking prevalence of public secondary school students in IBNLGA.

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CHAPTER TWO

LITERATURE REVIEW

2.1 Brief History of Tobacco

Tobacco use started with the people of the Western hemisphere who used the plant for millennia before coming in contact with the Europeans in 1492. Cultivation of tobacco was done by Native Americans in Central and South America which was also used for religious purposes as depicted in Mayan temple carvings (Slade, 1997).

By October 1492, the spread of tobacco from the Americas to the rest of the world consistently started when Columbus was offered dried tobacco leaves at the House of the Arawaks who took the plant back with him to Europe (IARC, 1986a); the technique of smoking was picked up at the same time. *Nicotiana tabacum*; the commonly used tobacco was planted in France and Spain which came from seed that originated in Brazil and Mexico. The species first grown in Portugal and England was *Nicotiana rustica*, the seed coming from Florida and Virginia, respectively (IARC, 1986a). Tobacco was grown, smoked and chewed by numerous peoples and eventually became global; it certainly featured as an important trade-able source of income from the time of its discovery by Columbus until the present day.

The modern history of tobacco really starts with the design of the cigarette machine in the middle of the nineteenth century (Bonsack, 1881). Since the 1920s, most tobacco has been smoked in cigarettes, with cigars, pipes and chewing tobacco. Over the 20th century for several reasons, cigarette became the most preferred tobacco product of Americas; in particular, cigarette served as an efficient means for absorption of nicotine and cheapest form of tobacco.

2.2 Prevalence of Cigarette Smoking

Cigarette smoking represents a significant public health problem and has been identified as the single largest preventable cause of disease and premature death in the United States (U.S. Surgeon General, 1989). In a study conducted by The Global Youth Tobacco Survey (GYTS) which was designed by the Centre for Disease Control and Prevention and the

World Health Organization estimated the worldwide burden of tobacco use among youth which included school children from 131 countries showed a global prevalence of 8.9 % for current smoking students (Warren, Jones, Eriksen and Asma, 2006). The GYTS reported a cigarette smoking prevalence of 5.7 % among college students aged 13–15 years (GYTS, 2008).

Cigarette smoking has been associated with an extensive list of health disorders as well as reduction of life expectancy (Detels, 2002; Doll, 2004). On the average cigarette smokers lose about 15 years of their life (WHO, 2008) and an estimated 4 million cigarette smokers die worldwide annually (The Global Youth Tobacco Survey Collaborative Group, 2002). The prevalence of smoking differs between populations globally (Eriksen, Mackay and Ross, 2012; WHO, 2014). Smoking prevalence is influenced by many factors ranging from individual level factors (such as education) to country-level factors such as National Economic Development and Implementation of Tobacco Control Policies (Gilmore, McKee, Telishevska and Rose, 2000; Pomerleau, Gilmore, McKee and Haerpfel, 2004).

The highest prevalence of tobacco consumption has been found in high income Western European countries with a 37% prevalence among men and 25% among women (Eriksen et. al, 2012; the World Bank, 2010) which declined to 26% between 1990- 2009. Cigarette consumption in Africa and in some Middle Eastern countries increased by 57% in 2012 (Eriksen et. al, 2012). According to the World Health Organization, it is estimated that 1.1 billion people, representing a third of the world population above the age of 15 years, use tobacco, principally in the form of the cigarettes and of these, 700 million of them being males live in developing countries. While smoking rates have been on the decline in the developed countries, they have however been on the high side in the developing countries and it has increased by as much as 50 %, especially in Asia and in the Pacific region. This has resulted in about four million deaths as a result of the 50% increase in rate of smoking cigarette in developing countries (Eriksen et. al, 2012).

In Europe, an estimate of 26% of people aged 15 years and above resulting to approximately 100 million of the population smokes on a daily basis (AIHW, 2008). In China, more than 300 million people are tobacco users while in India about 275 million people use tobacco and about 57 million Indonesians are tobacco smokers (David, 2012). However, in Africa,

the prevalence of smoking varies from country. Smoking prevalence has been estimated to range from 15-67% and has reportedly been on the increase at an estimated value of 2.5% which is higher than the rate of increase observed in other developing countries (Stanley, Jamison, Mosley, Measha and Bobadila, 1993). Comparatively, in Nigeria, 8.0% of males and 0.5% of females smoke (Pampel, 2008). In a study conducted by Karimy et. al (2012) on smoking prevalence of high school students, the result showed the prevalence rate of smoking experience to be 7-25% among Iranian boy adolescents.

This measure was reported to be 44.6% in Kerman, Iran. Moreover, in this same study, 1.9-2.5% of adolescents were daily smokers and their mean age at the beginning of smoking was 12-14 years. There are conflicting evidences on the actual prevalence of cigarette smoking in Nigeria. Individually conducted studies in parts of Nigeria show a considerably high smoking prevalence rate. 17.6% was obtained among rural dwellers in the South-west region in 2003 (Ayankogbe, Inem, Bamgbala and Robert, 2003) and 31.9% among adults in North-Eastern Nigeria in 2008 (Desalu, Olokoba, Danburam, Salawu and Issa, 2008). The prevalence rate obtained from the National Survey carried out in 2002 was 8.6 (Shafey, Dolwick and Guindon, 2003). Results from the Nigeria Demographic and Health Survey (NDHS) 2013 found that 0.7% of adults aged 15 to 19 years and 9% of adults aged 15-49 years smoke cigarette while 6.3% of secondary school students used cigarette (Tafawa, Viswanath, Kawachi and Williams, 2012; NPC and ICF macro, 2014).

Studies conducted in Saudi Arabia shows the prevalence of cigarette smoking to be 35% where 16.5% smoking prevalence as found among secondary school students, 13.5% among undergraduates, 22.6% among adults, 25% among elderly people, 26.5% among males and 9% among females (Al Nohair, 2011). In 2008, the prevalence of smoking among Nigerian youth according to The World Report on the Global Tobacco Epidemic was 3.5% (Global adult tobacco survey, 2012). A more recent Global adult tobacco survey (GATS) carried out in 2012 found that 3.7% of adults aged 15 years and above smoke cigarette in Nigeria. In the face of these conflicting reports however, Drope reports that the smoking prevalence among adolescents and young adults in Nigeria is on the increase just like in many developing countries (Drope, 2011).

Smoking has been shown to be a leading cause of premature mortality and morbidity resulting in several millions of deaths globally. It has been predicted that if the pattern currently seen among youth continues, a lifetime of tobacco use would result in the deaths of 250 million children and young people alive today with most of them in developing countries (WHO, 2012). In Nigeria, the prevalence of tobacco use among adults is generally lower than in more developed countries.

However, prevalence among youth tends to be higher than among adults. Prevalence of cigarette smoking among secondary school students varies from one part of Nigeria to the other and it appears that the prevalence is higher in the Northern part of Nigeria compared with the South (Omokhodion and Faseru, 2008; Salawu et al., 2009; Yahya. Hammangabdo and Omotara, 2010; Adeyeye, 2011). A mean lifetime smoking prevalence of 26.4% was reported among secondary school students with values ranging from 7.2% to 42.9% (Odukoya, Odeyemi, Oyeyemi and Updhyay, 2013). Several studies have investigated the cigarette smoking behaviour of adolescents and other adults in Nigeria (Adeyeye, 2011; Fawibe and Shittu, 2011; Babatunde, Elegbede, Ayodele, Atoyebi, Ibirongbe and Adeagbo, 2012; Odey, Okokon, Ogbeche, Jumbo and Ekanem, 2012; National Bureau of Statistics, 2013; Ogala, 2013; Ebirim, Amadi, Abanobi and Ilo, 2014; Taniowo, Taniowo and Oloyede, 2014). These studies were carried out in the Southwest and South-east of Nigeria respectively. The findings were that cigarette smoking was prevalent among adolescents especially in the secondary and tertiary institutions in Nigeria.

Furthermore, Adeyeye 2011 reports that cigarette smoking was more common among the male than female students who smoked between 3-7 sticks per day; Fawibe and Shittu 2011 posit that undergraduates in Southwest universities smoked between 4.46 and 4.49 sticks of cigarettes per day, a behaviour influenced by friends, colleagues and siblings. Odey et al. 2012 in another development found that cigarette smoking among adolescents in Calabar, South-south Nigeria is 6.4 percent with more males as participants. Taniowo et al 2014 found that the prevalence of cigarette smoking of final year students in Oyo State, Nigeria was fairly high. It has been reported that smoking prevalence in College students is complicated because they believe they can easily quit smoking ignoring its addictive properties, and ultimately believe they can be spared from the long-term effect of smoking (Rienzo, 1997).

A study conducted in Nigeria on the prevalence of cigarette smoking among adolescents in Calabar city, south-eastern results in a prevalence of 6.4% among adolescents. The prevalence of cigarette smoking was higher among males (13.0%) than was observed for females (2.1%). Of the adolescents that smoked, 79% were males while 21% were females (Friday, Ita, Jude, Godwin and Emmanuel, 2014). Another to a study conducted by Chukwujekwu Chidozie Donald (2014) on the use psychoactive substance among Nigerian students; patterns and sociodemographic correlates shows the proportion of Nicotine use in students to be 43.7%.

Awopeju et al in 2013 conducted a study on the smoking prevalence and attitude regarding its control among health professional student in South-Western Nigeria. The result of the study showed the life time prevalence of ever smokers among respondents to 17.9% with 11.9% among females compared to 23.9% among males. In study conducted on the age of initiation, determinants and prevalence of cigarette smoking among teenagers in Mushin Local Government Area of Lagos State Nigeria, out of 402 respondents who participated in the study, 24.9% of the respondents had ever smoked cigarette while 14.7% were current smokers. The mean age of initiation of smoking was 15 years of age (Abiola, Balogun, Odukoya, Olatona, Odugbemi, Moronkola, Solanke, Akintunde, and Fatoba, 2016).

Another study conducted on the determinants of smoking initiation and susceptibility to cigarette smoking among school going adolescents in Lagos State Nigeria shows that 9.7% had initiated smoking tobacco of which cigarette was the most prominent form (75.5%). The age of smoking initiation ranged from 7- 19 years of age and more than one third (36.1%) of the respondents had progressed towards current smoking at the time of the survey (Oluwakemi, Kofoworola, Abisoye, and Ravi, 2013).

2.3 Factors Influencing Smoking Behaviour in Adolescents

Various researchers have reported different factors that influence adolescents to use tobacco in various parts of Africa. Factors that influence smoking behaviours in young adolescents include parents' and teachers smoking status (Kwamanga, Odhiambo and Amukoye, 2003, Islam and Johnson 2005, Rudatsikira, Muula and Siziya, 2007, Osungbade and Oshimane 2008), Individual factors which includes perception, self-image and peers, Social factors (societal norms); Demographic factor. Cognitive factors; Environmental factors

(advertisement and economics) and Cultural factors. Demographic factors such as age and ethnicity are a factor influencing health behaviours in adolescents. Male gender is a significant predictor of smoking initiation in adolescents (Spear and Kulbok, 2001). Adolescents who have close friends or in a close relationship peers that use cigarette are more likely to smoke (Siziya, Ntata, Rudatsikira, Makupe, Umar and Muula, 2007; Rudatsikira, Muula and Siziya, 2007; Muula, Siziya and Rudatsikira, 2008; Odeyemi, 2009). Ethnicity may also be an important factor in smoking behaviours. Several studies have shown that white adolescents are more likely to smoke cigarette than non-white adolescents (Gilmore et. al, 2000).

Another result of the research conducted by Birds, Staines- Orozco and John in 2016 on Adolescents' smoking experience, family structure, parental smoking and socio-economic status in Mexico shows that adolescents residing in rural areas with low socio-economic settings were 2.7 times more likely to have smoked and 1.9 times more likely to be current smokers when compared to adolescents residing in urban areas with high socioeconomic settings. The result of this finding also showed that adolescents who lived in non- intact families (divorced, separated families) were 2.2 times more likely to be current smokers compared to those residing in intact homes (adolescents living with both parents).

This factor has to do with coherence and self-efficacy in determining smoking behaviours. Sense of coherence determines the extent to which a person feels confident about his/her life as being understandable, manageable and meaningful (Antonovsky, 1987). Research has shown that individuals with high sense of coherence are more likely to engage in positive health behaviours. on the contrary, Van Loon 2001 reported that women who smoked had low level of sense of coherence that those who never smoked (Van Loon, 2001). Self-efficacy however is well known to influence health behaviour (Von, Ebert, Ngamvitro, Park and Kang, 2004). Bandura's Theory of Self-efficacy, 1977 suggests that the behaviour of an individual is best predicted by their confidence in the ability to accomplish a given task.

2.4 Attitude towards Cigarette Smoking

A study conducted at the University of Nigeria, Nsukka on cigarette smoking prevalence and awareness amongst undergraduate students shows that students who had neither

smoking parents, siblings or friends had better attitude towards cigarette smoking (Kosisochi Chinwendu, Ezinne Mmasinachi Jiburu, Sundary Odunke Nduka and Matthew Jegbefunwe Okonta, 2017). Another study conducted on the smoking habits, awareness of risk and attitude towards tobacco control policies among medical students in Lagos Nigeria concluded that 92.4% of students supported the ban of cigarette smoking in enclosed public places and 91.2% supported the ban on sales of cigarette to persons younger than 18 years of age. However, support of ban on cigarette advertisement and raising taxes on cigarette sales on ever smokers and current smokers was recorded in 81.6% and 77.6% of students respectively (Dania, Ozoh and Bandele, 2015).

In 2013, Awopeju, et al conducted a study on the smoking prevalence and attitude regarding its control among health professional student in South-Western Nigeria. There were clear differences between smokers and non-smokers in their attitude to smoking issues. Ever smokers were significantly less likely than non-smokers to indicate that tobacco sales to adolescents should be banned. The result of the study showed that 88.5% of respondents agreed that tobacco sales to adolescents should be banned. Also 91.2% of respondents agreed that smoking of cigarette should be banned in restaurants and 89.4% agreed that smoking in enclosed areas should be banned (Awopeju et al, 2013).

Furthermore, in a study conducted 2016 by Xianglong, Cheng and Yong, smoking related attitudes were determined by their ability not to smoke in future, their pride of being non-smokers, their support of discouraging smokers, their concern on their health status, confidence to reduce smoke and helping others to refuse smoking or quit smoking. The result of the study shows that a higher proportion of non-smokers (91.1%) than smokers (66.8%) responded that they had decided not to smoke in future. Non-smokers had a negative attitude towards smoking than smokers and the former were proud to be non-smokers, supported others not smoking, were concerned about their health, had confidence to refuse smoking and looked for ways to quit smoking (Xianglong, et al 2016).

In Kenya, it was found out that perception regarding drugs including cigarette smoking contributes contributed to their attitude towards drug abuse. Students who had positive attitude towards drug use were themselves drug users (Kyalo and Mbugua, 2011). In various students conducted in Kenya, the result showed that one out of five of the respondents

thought that students who smoked cigarette had more friends while one out of ten respondents who smoked cigarette were perceived to be more attractive (Kyalo and Mbugua, 2011).

2.5 Theoretical Frame-Work

The theoretical framework used in the development of this study was PRECEDE-PROCEED model. PRECEDE-PROCEED is a planning model, not a theory. It does not predict or explain factors linked to the outcomes of interest, but offers a framework for identifying intervention strategies to address these factors. Developed by Green, Kreuter, and associates PRECEDE-PROCEED provides a road map for designing health education and health promotion programs. It guides planners through a process that starts with desired outcomes and works backwards to identify a mix of strategies for achieving objectives. Because the model views health behaviour as influenced by both individual and environmental forces, it has two distinct parts: an “educational diagnosis” (PRECEDE) and an “ecological diagnosis” (PROCEED). The PRECEDE acronym stands for Predisposing, Reinforcing, Enabling Constructs in Educational/ Environmental Diagnosis and Evaluation. Developed in the 1970s, this component of the model posits that an educational diagnosis is needed to design a health promotion intervention, just as a medical diagnosis is needed to design a treatment plan. PROCEED stands for Policy, Regulatory, and Organizational Constructs in Educational and Environmental Development. This element was added to the framework later, in 1991, to consider the impact of environmental factors on health. Together, these two components of the model help practitioners plan programs that exemplify an ecological perspective.

PRECEDE-PROCEED has nine steps. The first five steps are diagnostic, addressing both educational and environmental issues. These include: social assessment, epidemiological assessment, behavioural and environmental assessment, educational and ecological assessment, and administrative and policy assessment. The last four comprise implementation and evaluation of health promotion intervention. These include: implementation, process evaluation, impact evaluation, and outcome evaluation. During the diagnostic steps of the model, practitioners employ various methods to learn about the community’s perceived and actual needs, as well as the regulatory context in which the intervention will operate. To conduct social assessment, the practitioner may use multiple

data collection activities (e.g., key informant interviews, focus groups, participant observation, surveys) to understand the community's perceived needs.

Epidemiological assessment may include secondary data analysis or original data collection to prioritize the community's health needs and establish program goals and objectives.

Behavioural and Environmental Assessment identifies factors, both internal and external to the individual, that affect the health problem. Reviewing the literature and applying theory are two ways to map out these factors.

Educational and Ecological Assessment, the practitioner identifies antecedent and reinforcing factors that must be in place to initiate and sustain change. Behaviour such as reducing intake of dietary fat, engaging in routine physical activity, and obtaining annual mammograms is shaped by predisposing, reinforcing, and enabling factors. Practitioners can use individual, interpersonal, or community-level change theories to classify determinants of behaviour into one of these three categories and rank their importance. Because each type of factor requires different intervention strategies, classifying them helps practitioners consider how to address community needs. The three types of influencing factors include:

Predisposing factors, which motivate or provide a reason for behaviour; they include knowledge, attitudes, cultural beliefs, and readiness to change.

Enabling factors, which enable persons to act on their predispositions; these factors include available resources, supportive policies, assistance, and services.

Reinforcing factors, which come into play after a behaviour has been initiated; they encourage repetition or persistence of behaviours by providing continuing rewards or incentives. Social support, praise, reassurance, and symptom relief might all be considered reinforcing factors.

In the final diagnostic step of PRECEDE-PROCEED, Administrative and Policy Assessment, intervention strategies reflect information gathered in previous steps; the

availability of needed resources; and organizational policies and regulations that could affect program implementation.

The four remaining steps of PRECEDE-PROCEED comprise program implementation and evaluation. Before Implementation (Step 6) begins, practitioners should prepare plans for evaluating the process (Step 7), impact (Step 8), and outcome (Step 9) of the intervention. Process Evaluation gauges the extent to which a program is being carried out according to plan. Impact Evaluation looks at changes in factors (i.e., predisposing, enabling, and reinforcing factors) that influence the likelihood that behavioural and environmental change will occur. Lastly, outcome evaluation looks at whether the intervention has affected health and quality-of-life indicators.

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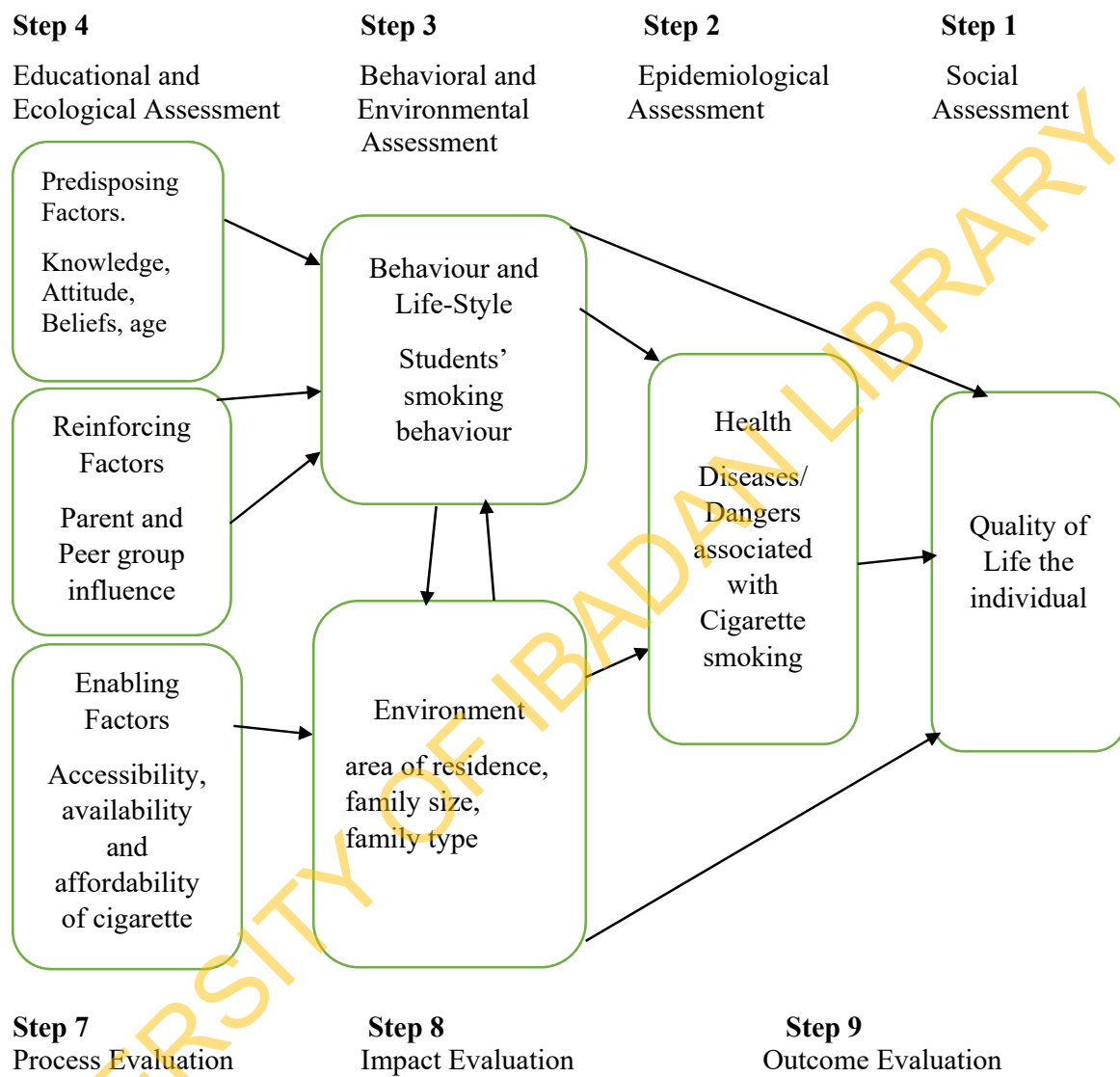


Figure 2.1: PRECEED- PROCEED Model

CHAPTER THREE

METHODOLOGY

3.1. Study Design

This study was a cross-sectional study using quantitative data collection method.

3.2 Study Area

The study was carried out in IBNLGA of Oyo State, which is one of the 5 LGA in Ibadan metropolis, with an estimated size of 27,249 square kilometres. There are 12 geo-political wards in IBNLGA. The population size is 432, 900 (Projected Population, 2016) and the people are mainly of the Yoruba tribe. Other ethnic groups in Nigeria are well represented but constitute the minority. There are about 72 secondary schools with two main categories in IBNLGA; 42 public schools and 30 private schools. The public schools are under the control of the State Government and mainly populated by adolescents from relatively low socioeconomic class (Ibadanland. Net). IBNLGA was been purposively selected for this study because it was easier for the investigator to assess the communities and data on the LGA than others.

3.3 Study Population

All public secondary school students in the IBNLGA were the target population for this study. The majority of the students was expected to fall within age 10 to 19 years.

3.4 Sample Size Determination

The postulated prevalence of tobacco use; a psychoactive substance use among young people outside formal school setting in Lagos State is 32.5% (Odukoya et al, 2016) and it is hypothesised that for null hypothesis to be true the proportion of adolescents in the population is 5% less or more than the postulated prevalence. Using Leslie Kish formula for estimating sample size for one-sample comparison of proportion to hypothesized value was required for the study at 95% level of confidence. This estimated value was obtained as shown below:

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

where:

n = sample size

Z^2 = percentage point of the normal distribution corresponding to the (two sided) significance level = 1.96 at 95% level of significance (two-sided test)

p= proportion of cigarette smokers in the population = 0.325 (Odukoya et al, 2016)

d is the degree of freedom 0.05

n= 312.13

Estimate for non-response = assume 10% of the study size.

$$312.13 \times 10/100 = 31.213$$

Therefore, sample population = 312.13 + 31.213 = 343.343 approximately 343

The total sample size that was used for this study was 349

3.5 Sampling Method and Sampling Procedure

The sampling units for this study were adolescents in secondary schools aged 10 to 19 years. A multi-stage sampling technique was employed to select schools and students from the schools.

Stage 1: Random selection of four wards from the existing 12 wards in IBNLGA.

Stage 2: Selection of a school each across each ward, which was done using balloting to make a total of seven schools.

Stage 3: Administration of questionnaire to respondents who met the inclusive criteria

3.6 Inclusive and Exclusive Criteria

3.6.1 Inclusion criteria

Eligibility for participating in the study was based on being:

1. Any student in one of the selected public secondary school in IBNLGA
2. Students within the age of 10 - 19 years

3.6.2 Exclusion criteria

Individuals in the study area was not eligible to participate in the study if any of the inclusion criteria are not met.

3.7 Research Instrument

A semi-structured Interviewer-Administered questionnaire was designed in English language for adolescents to collect quantitative data. The questionnaires were structured and divided into sections based on the objectives of the study as follows:

Section A: Socio-demographic characteristics

Section B: Students' knowledge on the dangers associated with cigarette smoking

Section C: Factors influencing smoking behaviour among public secondary school students in IBNLGA

Section D: Prevalence of Cigarette smoking among public secondary school students in IBNLGA

Section E: Students' Attitude towards Cigarette smoking

3.8 Validity of Instrument

The validity of the questionnaire was ensured through, input of the project supervisor, review by lecturers in the department of Health Promotion and Education (HPE), in-house pre-test among research assistant and masters students of HPE, review of relevant literatures and the conceptual framework that was used for the study. Each item on the questionnaire corresponded with its sections and the instrument was conducted in line with the objectives of the study.

3.9 Reliability of Instrument

In order to ensure the reliability of the instrument, a pre- test was carried out in Ibadan North- East Local Government Area (IBNELGA) using 10% of the sample size of 312 to test the reliability of the instrument. It was conducted in Monotan High School in IBNELGA. The findings from the pre-test was used to make necessary corrections to the instrument. The pre-tested questionnaires were analysed using Statistical Package for Social Sciences (SPSS) version 22 to measure the consistency of the instrument given a Cronbach Alpha of 0.7

3.10 Data Collection Procedure

Three research assistants were recruited and trained on purpose of the study, interpersonal communication, obtaining of informed consent and data collection procedures. These research assistants assisted in administering the questionnaire to the students and were also involved in the data collection at pre-test.

A minimum of 349 students from seven selected public secondary schools in IBNLGA who meet the inclusion criteria were enrolled into the study after obtaining informed consent from them. Informed consent was gotten from the school authority and adolescents who were willing to participate in the study; second for the administration of questionnaire.

During a break hour or a free period, all consenting adolescents in each school were brought together in a hall for a meeting. The purpose of the study was clearly explained to them and they were assured of confidentiality of volunteered information. In addition, they were informed that their participation was voluntary and verbal consent and written consent were obtained from them before being given the questionnaire. Also, an accent form indicating the purpose of the study was signed by the principal of each schools for adolescents less than 18 years of age before participating in the study.

The research student was available to read out each question to the students and make necessary clarifications to anyone who requested for more information on any part of the questionnaire.

3.11 Data Management and Analysis

Administered questionnaires were safely kept. Data were entered and analysed using the Statistical Package for Social Sciences (SPSS) version 22. The main outcome variables were self-reported cigarette smoking status score (Quantitative). Independent variables would be the socio-demographic status of respondents. The data was summarized in frequencies, percentage and means. The respondents' knowledge was scored with every correct answer scoring one point and incorrect or non- response scoring zero. The scores were summed and categorized as poor (<8) and good (≥ 8) knowledge using a total knowledge score of 16. Attitude of respondents was scored with every correct response scoring two points, indifferent response scoring one and negative response scoring zero. The scores were

summarized and categorized as negative (<6) attitudes and positive (≥ 6) attitudes using a total attitude score of 12. Statistical tests of significance Chi-square test was utilized for cross-tabulations between the dependent and independent categorical variables at 5% level of significant.

3.12 Ethical Consideration

Ethical approval was obtained from the Oyo State Ministry of Education Research Ethics Committee. The respondents' consent was obtained after provision of adequate, clear and complete information about what the study entailed. Consent was obtained from adolescents above 18 years of age while consent was obtained from principals for students who are less than 18 years old.

A verbal and written consent that do not require the names of the participants but only their signatures and date was obtained from the respondents. They were also informed that participation is voluntary and that data collected was used mainly for research purposes. Anonymity and confidentiality of responses was also assured.

3.13 Study Limitation

Despite the contributions of this study to knowledge, this study is not without its limitations. The limitations of this study should be noted in interpreting the findings and conceptualizing future research. Although, this study will contribute to the body of research but has its limitations. The research was not able to make use of large sample size; the study was done only on few secondary school students in Ibadan North Local Government area. Therefore, result is not sufficient to be generalisable.

Finally, future research could equally examine more other factors that may influence students' longing for cigarette or reduce their understanding of its harmful effects such as sales promotion and advertisements of cigarette or tobacco companies.

CHAPTER FOUR

RESULTS

The results of this research are presented in this section, starting the socio-demographic characteristics of respondents, their knowledge on the dangers associated with Cigarette smoking, factors influencing smoking behaviour in respondents, prevalence of Cigarette smoking among respondents and their attitude towards cigarette smoking. This section also shows results on mean knowledge scores and relationships between variables.

4.1 Socio-Demographic Characteristics of Respondents

The total number of respondents that took part of the survey was 349 of which 1.6% of the respondents was less than 10 years of age, 43.9% of the respondents fall within the ages of 10-14, 53.9% fell within 15-19 years of age while the minority of the respondents fall within the age group of 20-24 and 61.9% were male. Majority of the respondents were Christians (64.5%) while 34.1% of the respondents were Muslims. The population consists of 76.5% Yoruba indigenes, 16.0% Igbo and 7.5% Hausa. Majority of the respondents (53%) were in SSS1- SSS3 while less than half of the respondents (43%) were in JSS1 - JSS3.

The parents of the respondents in this survey averagely are secondary school holders. The parents were mostly traders both father and mother's occupation representing 57.0% and 70.0% respectively. Out of 349 respondents, 73.6% of them were monogamous families while 16.9% of the population were from polygamous families. More than half of the respondents (55.0%) of the respondents resides in urban areas (Table 4.1).

Table 4.1 Socio-Demographic Characteristics of Respondents N=349

Socio-Demographic Characteristics	Frequency (N)	Percentage
Age		
10-14	142	45.5
15-19	168	53.9
20-24	2	0.6
Sex		
Male	216	61.9
Female	133	38.1
Religion		
Islam	119	34.1
Christianity	255	64.5
Traditional	5	1.4
Ethnic Group		
Yoruba	267	76.5
Igbo	56	16.0
Hausa	26	7.5
Class of Respondent		
JSS1- JSS3	154	47.0
SSS1-SSS3	185	53.0
Family Type		
Monogamous	257	73.6
Polygamous	59	16.9
Divorced	9	2.6
Separated	24	6.9
Area of Residence		
Rural	157	45.0
Urban	192	55.0
Number of Children in the Family		
<3	49	14.0
3-5	222	63.6
>5	78	22.4

Table 4.1.1 Respondents' Parent level of Education and Occupation N=349

Parents level of Education and Occupation	Frequency (N)	Percentage
Mother's level of Education		
No Formal Education	27	7.7
Primary	54	15.5
Secondary	157	45.0
Tertiary	111	31.8
Father's level of Education		
No Formal Education	11	3.2
Primary	36	10.3
Secondary	172	49.3
Tertiary	130	37.2
Mother's Occupation		
Civil Servant	53	15.2
Trader	234	70.0
Banker	16	4.6
Artisan	37	10.6
Farmers	9	2.6
Father's Occupation		
Civil Servant	72	20.6
Trader	199	57.0
Banker	18	5.2
Artisan	34	9.7
Farmers	26	7.4

4.2 Respondents' Knowledge on the Dangers associated with Cigarette Smoking

Majority (67.9%) of respondents correctly mentioned that Nicotine is present in cigarette. Less than half (41.3%) of the respondents correctly mentioned Tar to be one of the main substances present in cigarette, 40.1% correctly mentioned Carbon (II) Oxide to be one of the main substances present in cigarette. One hundred and thirty-seven respondents (39.3%) could not correctly mention that menthol is not a main substance present in cigarette. Out of 349 respondents, 70.5% of respondents correctly mentioned lung cancer to be a disease associated with cigarette smoking, more than half of the Respondents (57.3%) correctly mentioned asthma attack to be associated with cigarette smoking. More than half of the respondents (67.3%) of respondents correctly mentioned heart disease to be associated with cigarette smoking. Less than half (11.6%) of the respondents correctly stated that healthy brain is not a disease associated with cigarette smoking (Table 4.2).

Out of 349 respondents, 24.1% of the respondents agreed that people smoke for recreation, 16.0% of the respondents agreed that people smoke for relaxation purposes. More than half of the respondents (50.7%) agreed that people smoke due to peer acceptance and influence while 9.2% of the respondents agreed that people smoking because their parents smoke (Figure 4.1). Majority (95.1%) of the respondents said yes to the statement that cigarette smoking is dangerous to your health.

More than half (95.7%) of the respondents said yes to the statement that cigarette smoking causes heart disease, 88.5% of the respondents said yes to the statement that smoking from other people's cigarette is harmful while 11.5% of the respondents disagreed that smoking from another people's cigarette is harmful. Out of 349 respondents, 240 (68.8%) respondents said yes to the statement that smoking shortens life span while approximately 80.2% of the respondents said yes to the statement that cigarette smoking triggers asthma attack. Furthermore, 73.1% of the respondents said yes to the statement that cigarette smoking does not cause lung cancer. Two hundred and two hundred and thirty-eight of the respondents said yes to the statement that cigarette smoking cannot result in low academic performance (Table 4.2).

The students' knowledge of smoking was assessed using a 16 scale and was categorised as poor (0-7) and good (8-16) knowledge. The overall mean knowledge score of the respondents was 10.2 ± 2.9 . In all, 254(72.8%) had good knowledge on the dangers associated with cigarette smoking (Table 4.2a).

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Table 4.2 Respondents' Knowledge on Cigarette smoking **N=349**

Knowledge Variables	Frequency	
	N (%)	N (%)
Nicotine is present Cigarette	237 (67.9) *	112 (32.1)
Tar is present in Cigarette	144 (41.3) *	205 (58.7)
Caron (II) Oxide is present in Cigarette	140 (40.1) *	209 (59.9)
Menthol is present in Cigarette	137 (39.3) *	212 (60.7)
Lung- Cancer is associated with Cigarette smoking	276 (70.5) *	103 (29.5)
Asthma Attack is associated with Cigarette smoking	200 (57.3) *	149 (42.7)
Heart Disease is associated with Cigarette smoking	235 (67.3) *	114 (32.7)
Healthy Brain is associated with Cigarette smoking	37 (10.6)	312 (89.4) *

*Correct Responses

N=349

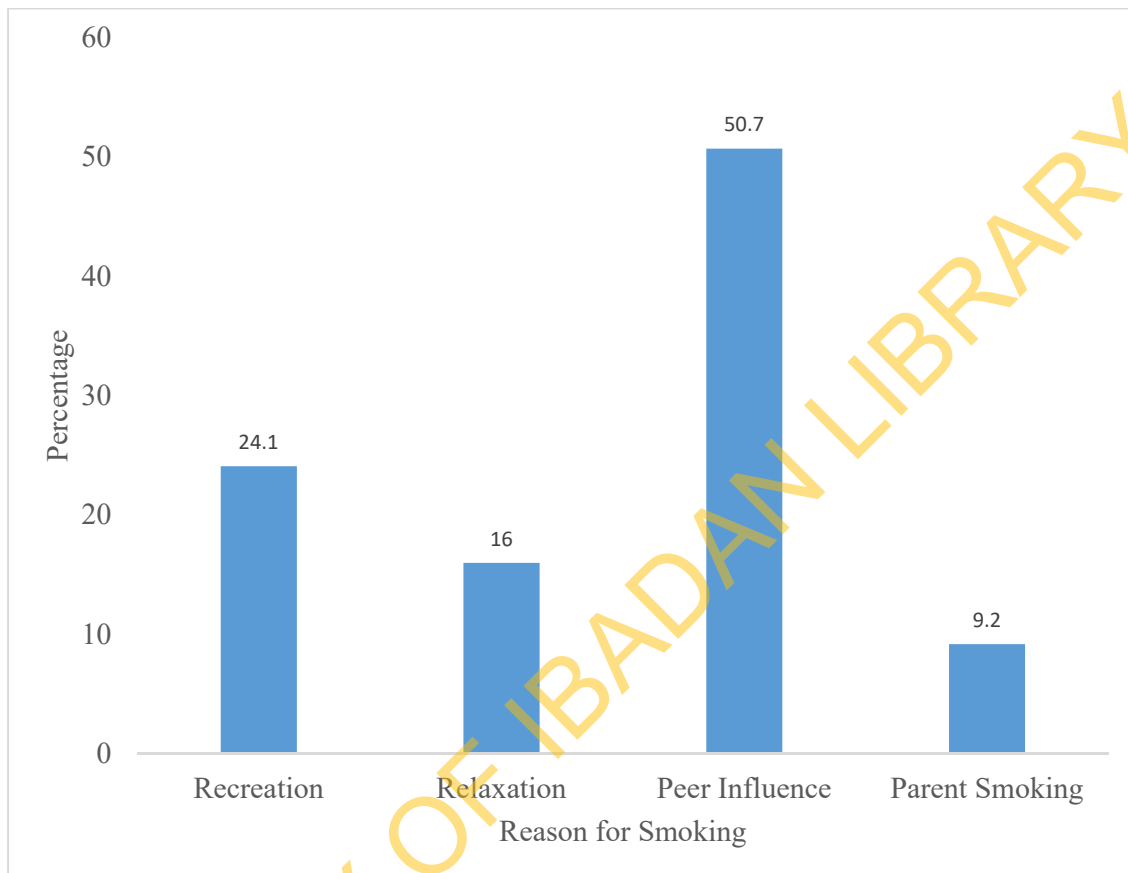


Figure 4.1: Reasons why Adolescents smoke

Table 4.2.1 Respondents' Knowledge about the Dangers Associated with Cigarette smoking **N=349**

Dangers Associated with Cigarette Smoking	Frequency	
	N (%)	N (%)
Cigarette smoking is dangerous to your health	332 (95.1) *	17 (4.9)
Cigarette smoking causes heart disease	334 (95.7) *	15 (4.3)
Smoking from another people's cigarette is harmful	309 (88.5) *	40 (11.5)
Smoking does not shorten life span	96 (27.5)	253 (72.5) *
Cigarette smoking triggers asthma attack	280 (80.2) *	69 (19.8)
Cigarette smoking does not cause lung cancer	81 (23.2)	268 (76.8) *
Cigarette smoking cannot result in low academic Performance	92 (26.4)	257 (73.6) *

*Correct Responses

Table 4.2.2 Overall Knowledge on the Dangers associated with Cigarette smoking

N=349

Knowledge of Smoking	Frequency	Percentage
Poor (<8)	95	27.2
Good (≥8)	254	72.8
Total	349	100

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4.3 Respondents' Attitude towards Cigarette smoking

Majority of respondents (70.2%) agreed that students should distance themselves from people who smoke, 14.0% of the responded were uncertain if students should distance themselves from people who smoke while 15.8% of the respondents disagreed to the statement that students should distance themselves from people who smoke. More than half of respondents (69.1%) disagreed on the statement that it is good to associate with people who smoke while 11.7% of the respondents agreed that it is good to associate with people who smoke.

Out of 349 respondents, 60.7% viewed smoking as an offensive act, 16.0% of the respondents were uncertain if smoking is an offensive act while 23.3% of the respondents disagreed that smoking is an offensive act. Majority (63.0%) of the respondents agreed that smoking should not be a public act while 21.2% of the respondents disagreed that smoking should be banned in public places. More than half (68.7%) of the respondents agreed that most students readily associate with smokers because they are not aware of the adverse effects of smoking with 22.1% of the respondents disagreed to the statement that most students readily associate with smokers because they are not aware of the adverse effect of smoking.

Moreover, 57.3% do not support joining smokers in the act of smoking while 22.1% of the respondents supported joining smokers in the act of smoking. More than half (67.3%) of the respondents supported that people should not smoke in their cars while 20.1% agreed that people can smoke in their cars. 57.3% of the respondents disagreed that they won't be bothered to associate with friends who smoke (Table 4.3).

The students' attitude towards cigarette smoking was assessed using a 12- item scale and was categorised as Negative (0-6) and Positive (7-12) attitude. The overall mean attitude score of the respondents was 8.9 ± 3.8 . In all, 295(84.5%) had positive attitude against cigarette smoking as shown in table 4.3a below:

Table 4.3 Respondents' Attitude towards Cigarette smoking N=349

Attitude towards Cigarette Smoking	Agree (%)	Undecided (%)	Disagree (%)
Students should distance themselves from people who smoke	245 (70.2) *	49 (14.0)	55 (15.8)
It is good to associate with people who smoke	41 (11.7)	67 (19.2)	241 (69.1) *
Smoking is an offensive act	212 (60.7) *	56 (16.0)	81 (23.3)
Smoking should be banned in public places	220 (63.0) *	55 (15.8)	74 (21.2)
Most students are ignorant about the adverse effect of smoking; hence, they readily associate with students who smoke	205 (68.7) *	67 (19.2)	78(22.1)
If a student's friend or relatives are gathering to smoke, he or she should join them in smoking rather than be alone	77 (22.1)	72(20.6)	200(57.3) *
People should not smoke in their cars	235 (67.3) *	44(12.6)	70 (20.1)
Associating with friends who smoke will not bother you	78 (22.3%)	71 (20.3)	200 (57.3) *

*Positive attitudes

Table4.3.1 Attitude Score towards smoking**N=349**

Attitude to Smoking	Frequency (N)	Percentage
Positive (>6)	295	84.5
Negative (\leq 6)	54	15.5
Total	349	100

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4.4 Factors Responsible for Cigarette smoking among Respondents

Table 4.4 revealed that 33.2% of the respondents agreed that smoking helps them fit in with other people, 12.6% of the respondents were not certain if smoking helped them fit in with other people while 54.2% disagreed that smoking helps them fit in with other people. Out of 349 respondents, 33.5% of the respondents agreed that smoking makes them feel confident while 53.0% of the respondent disagreed that smoking makes them feel more confident.

Furthermore, less than half (48.7%) of respondents agreed that they smoke because their friends smoke while 36.4% disagreed that they smoke because their friends smoke. Exactly, 28.1% of the respondents agreed that smoking is something to be done when they are bored while 54.4% disagreed that smoking is something to do when bored. One hundred and twenty-eight (36.7%) of respondents agreed that smoking makes them feel less worried while 54.4% disagreed that smoking makes them feel less worried.

Less than half (33.2%) of the respondents agreed that smoking is pleasurable while 51.0% disagreed that smoking is not pleasurable. Less than (31.5%) of the respondents agreed to the statement that smoking makes them feel more relaxed, 14.3% were uncertain if smoking made them feel more relaxed while 54.2% said smoking doesn't make them feel more relaxed. One hundred and twenty-four of the respondents representing 35.5% agreed that smoking gave them a sense of maturity while 51.3% of the respondents disagreed to the statement that smoking doesn't give a sense of maturity. However, less than half (41.0%) agreed that smoking is affordable and within reach while 45.0% of the respondent disagree to the statement that smoking is affordable and within reach. More than half (50.4%) of respondents do not agree that smoking brings comfort during celebrations/social activities while 31.5% of the respondent agreed that smoking brings comfort during celebrations/social activities. Finally, of all 349 respondents, 59.9%) of respondents agreed that they smoke because their parents smoke while 26.4% disagreed to this statement (Table 4.4).

Table 4.4 Perceived Factors Responsible for Cigarette smoking among Respondents

N= 349

Factors influencing smoking behaviour in students	Agree (%)	Undecided (%)	Disagree (%)
Smoking helps me fit in with other people	116 (33.2)	44 (12.6)	189 (54.2)
Smoking makes me feel more confident	117 (33.5)	47 (13.5)	185 (53.0)
I smoke because my friend smoke	170 (48.7)	52 (14.9)	127 (36.4)
Smoking is something to do when you are bored	98 (28.1)	61 (17.5)	191 (54.4)
Smoking makes me feel less worried	128 (36.7)	60 (17.2)	161 (46.1)
Smoking is pleasurable	116 (33.2)	55 (15.8)	178 (51.0)
Smoking makes me feel more relaxed	110 (31.5)	50 (14.3)	189 (54.2)
Smoking gives me a sense of maturity	124 (35.5)	46 (13.2)	179 (51.3)
Smoking is affordable and within reach	143 (42.3)	38 (11.2)	168 (46.5)
Smoking brings me comfort during celebrations/ social activities	110 (31.5)	53 (18.1)	176 (50.4)
I smoke because my parent smoke	209 (59.9)	48 (13.8)	92 (26.4)

4.5 Prevalence of Cigarette smoking among Respondents

Out of 349 respondents, a total of one hundred and twelve respondents (32.1%) are ever smokers while 97.3% of the total population are ever smokers are current smokers. Of the respondents that smoke, 83.9% of the respondents are males while 16.1% of the respondents are females. Only 36.6% of the respondents smoke daily, 34.8% of the respondents' smoke once a week, 18.8% of the respondents smoke twice a week and 9.8% of the respondents smoke more than three times a week. On the influence of friends, 43.6% agreed to having friends who smoke around them while 13.3% agreed they do have family members who smoke. Among the student's population, the smoking prevalence was 69.6% which was prominent among the 13-15 age group (Table 4.5).

Regarding Respondents' source of exposure to smoking, majority of the respondents (24.9%) agreed that peer group was their greatest source of exposure to smoking cigarette, 2.9% of the respondents agreed that radio was their greatest source of exposure to smoking cigarette, 17.8% of the respondents choose television to their greatest source of exposure to smoking. A fewer percentage (8.6%) of the respondents agreed that social media was their greatest source of exposure to smoking. Some of the respondents (19.5%) agreed that their parents especially their fathers were their greatest source of exposure to smoking.

However, 1.7% of the respondents agreed their siblings (brothers/sisters) were their greatest source of exposure to smoking cigarette, 4.6% of the respondents agreed that their uncles were their greatest exposure to smoking cigarette, 1.4% of the respondents agreed that their neighbours, clubs, beer joints were their greatest exposure to smoking cigarette (Figure 3).

Table 4.5: Prevalence of Cigarette smoking among Respondents **N=349**

Characteristics	Frequency (N)	Percentage
Ever smoked		
Yes	112	32.1
No	237	67.9
Current Smokers (n=112)		
Yes	109	97.3
No	3	2.7
Sex		
Male	94	83.9
Female	18	16.1
Frequency of Smoking (n=112)		
Daily	41	36.6
Once a week	39	34.8
Twice a week	21	18.8
More than three times a week	11	9.8
Age of Initiation of Smoking (n=112)		
<13	8	7.2
13-15	78	69.6
>15	26	23.2

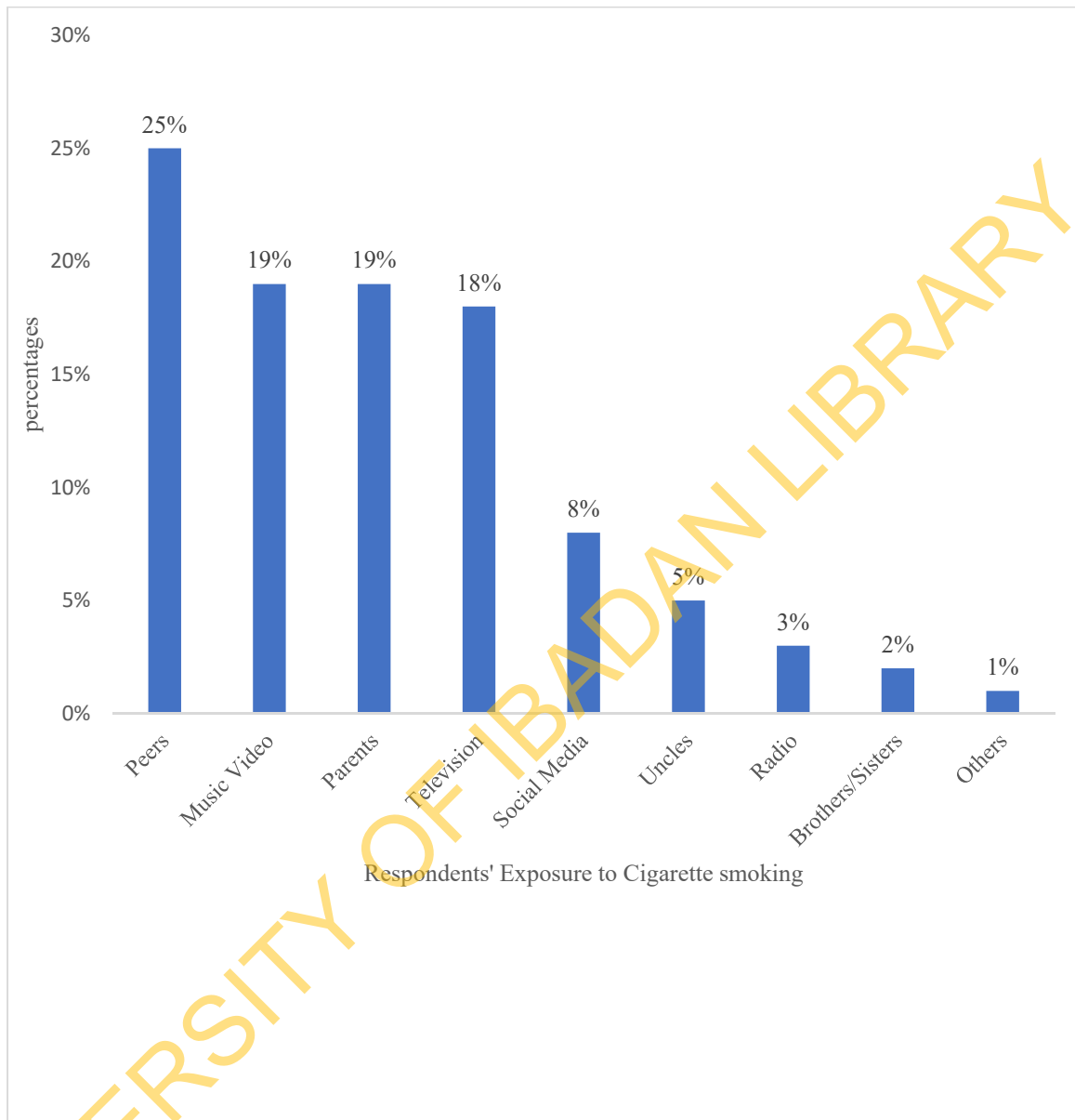


Figure 4.2: Respondents' Greatest Exposure to Cigarette smoking

4.6 Testing of Hypotheses

Hypothesis 1

There is no significant difference between Respondents' Socio-Demographic Characteristics and their Knowledge of the Dangers on Cigarette smoking.

Table 4.6 presents the association between selected students' socio-demographic characteristics and their knowledge of cigarette smoking. Table 4.6 shows respondents' knowledge about cigarette smoking by selected socio-demographic characteristic (sex, age, area of residence, mothers' level of education and family type).

The proportion of respondents with good knowledge score were compared with their sex. 70.4% of the male respondents had good knowledge score on the dangers of cigarette smoking and 76.7% of females had good knowledge score on the dangers associated with cigarette smoking. There was however no significant difference between the respondents' sex and their knowledge on the dangers associated with cigarette smoking ($p=0.217$). The distribution of respondents with good knowledge of the dangers of cigarette smoking and their area of residence 66.9% among those who reside in rural areas and 77.6% among those who reside in urban area. However, there was a significant difference between the respondents' area of residence and their knowledge on the dangers associated with cigarette smoking ($p=0.030$).

The distribution of respondents with good knowledge scores were compared to their mothers' level of education in batches no formal education, primary education, secondary and tertiary education scored 74.1%, 59.3%, 77.7% and 72.1% respectively. Overall, there was no significant difference between the respondents' mothers' level of education and their knowledge on the dangers of cigarette smoking ($p=0.073$). The proportion of respondents who had good knowledge on the dangers of cigarette smoking were from divorced families (100.0%) while those from polygamous homes had 86.4% good knowledge on the dangers of cigarette smoking. There was however no significant difference between the respondents' type of family and their knowledge on the dangers associated with cigarette smoking ($p=0.006$).

The proportion of respondents with good knowledge on the dangers of cigarette smoking who came from large families with less than 3 children, 3-5 children and more than five children increases by 54.9%, 72.5% and 72.9% respectively. There was a significant difference between the respondents' family size and their knowledge on the dangers of cigarette smoking ($p=0.046$).

In view of the fact that there was no significant individual relationship between respondents' sex, age, mothers' level of education, type of family and family type, the null hypothesis is therefore not rejected (Table 4.6).

Hypothesis 2

There is no significant difference between Respondents' Socio-Demographic characteristics and their Attitude towards Cigarette smoking.

Table 4.7 below shows respondents' attitude towards cigarette smoking by selected socio-demographic characteristic (sex, age, area of residence, mothers' level of education, family type and family size).

The proportion of respondents with positive attitude were compared with their sex. A total of 85.2% of male respondents had positive attitude towards cigarette smoking while 83.5% female respondents had positive attitude towards cigarette smoking. There was however no significant difference between the respondents' sex and their attitude towards cigarette smoking ($p=0.761$). The distribution of respondents with positive attitude were compared with the age of respondents. More than half of the respondents (84.3%) less than 13 years of age had positive attitude towards cigarette smoking, 85.8% of respondents between the ages of 13-15 years of age had positive attitude towards cigarette smoking while 88.8% of the respondents greater than 15 years of age had positive attitude towards cigarette smoking. There was however a significant difference between the respondents' age and their attitude towards cigarette smoking ($p=0.002$).

The proportion of respondents with positive attitude were compared with their area of residence. Majority (84.7%) of respondents' residing in rural areas have positive attitude towards cigarette smoking while 84.4% of respondents residing in urban areas have positive

attitude towards cigarette smoking. There was no significant difference between the respondents' area of residence and their attitude towards cigarette smoking ($p=0.931$). The distribution of respondents' mothers' level of education was compared with their positive attitude to cigarette smoking in batches no formal education, primary education, secondary education and tertiary education was 81.5%, 90.7%, 83.4% and 83.8% respectively. There was however no significant difference between the respondents' mothers' level of education and their attitude towards cigarette smoking ($p=0.578$).

The distribution of respondents' family type compared with their attitude towards cigarette smoking in batches monogamous, polygamous, divorced and separated was 84.0%, 83.1%, 88.9% and 91.7%. It was observed that there was no significant difference between the respondents' family type and their attitude towards cigarette smoking ($p=0.751$). Furthermore, the proportion of respondents' family size and their positive attitude towards cigarette smoking was also assessed. Majority (86.6%) of respondents who came from families with less than 3 children had positive attitude towards cigarette smoking, 83.7% of the respondents from families with 3-5 children had positive attitude towards cigarette smoking while 75.8% of the respondents from families with more than 5 children had positive attitude towards cigarette smoking. There was however no significant difference between the respondents' family size and their attitude towards cigarette smoking ($p=0.067$).

In view of the fact that there was no significant individual relationship between respondents' sex, age, area of residence, mothers' level of education, type of family, and family size. The null hypothesis is therefore accepted (Table 4.6a).

Hypothesis 3

There is no significant difference between the Respondents' Socio-Demographic Characteristics and the Prevalence of Cigarette smoking among students of IBNLGA.

The result shows the association between selected socio- demographic characteristics of respondents (sex, age and area of residence) and their prevalence of cigarette smoking. The proportion of respondents who agreed to smoking cigarette were 43.5% males and 13.5% females. There was however a significant difference ($p=0.000$) between the respondents'

sex and prevalence of cigarette smoking (table 4.8). the distribution of respondents' age was compared to the prevalence of cigarette smoking in batches <13, 13-15 and >15years was 3.5%, 26.5% and 66.0% respectively. There was a significant difference between the respondents' age and the prevalence of cigarette smoking ($p=0.000$).

The proportion of respondents' area of residence was compared the prevalence of cigarette smoking. Majority (42.0%) of respondents who agreed to smoking cigarette resides in the rural areas while 24.0% of the respondents resides in urban areas. There is therefore a significant difference between the respondents' area of residence and the prevalence of cigarette smoking ($p=0.000$). The proportion of respondents' mothers' level of education was also compared the prevalence of cigarette smoking. Less than half (40.7%) of the respondents who agreed to smoking cigarette had mothers with no formal education, 57.4% of respondents had mothers with primary school education, 25.5% of them had mothers 'with secondary education while 27.0% of respondents who mothers' highest level of education was tertiary education. There was no significant difference between the respondents' mothers' level of education and the prevalence of cigarette smoking however ($p=0.002$).

Furthermore, the proportion of respondents' family size and the prevalence of cigarette smoking was also assessed. Majority (43.1%) of respondents who came from families with less than 3 children agreed to smoking cigarette, 27.6% of the respondents from families with 3-5 children agreed to smoking cigarette smoking while 37.8% of the respondents from families with more than 5 children agreed to smoking cigarette. There was however a significant difference between the respondents' family size and the prevalence of cigarette smoking ($p=0.003$).

In view of the fact that there was a significant individual relationship between respondents' sex, age, area of residence, mothers' level of education and family size. The null hypothesis is therefore accepted (Table 4.6b).

Table 4.6 Association between Selected Respondents Socio-Demographic Characteristics and their level of Knowledge on the Dangers Associated with Cigarette smoking N=349

Socio-Demographic Characteristics	Level of Knowledge			χ^2	p-value
	Poor % (<8)	Good % (\geq 8)	Total (%)		
Sex of Respondent					
Male	64 (29.6)	152 (70.4)	216 (100.0)	1.660	0.217
Female	31 (23.3)	102 (76.7)	133 (100.0)		
Age of Respondent					
<13	17 (37.9)	47 (62.1)	64 (100.0)	17.408	0.235
13-15	35 (25.4)	101 (74.6)	136 (100.0)		
>15	43(37.1)	106 (62.9)	149 (100.0)		
Area of Residence					
Rural	52 (33.1)	105 (66.9)	157 (100.0)	5.015	0.030*
Urban	43 (22.4)	149 (77.6)	192 (100.0)		
Mother's Level of Education					
No formal education	7 (25.9)	20 (74.1)	27 (100.0)	6.958	0.073
Primary	22 (40.7)	32 (59.3)	54 (100.0)		
Secondary	35 (22.3)	122 (77.7)	157 (100.0)		
Tertiary	31 (27.9)	80 (72.1)	111 (100.0)		
Family Type					
Monogamous	77(30.0)	180(70.0)	257 (100.0)	12.427	0.006*
Polygamous	8(13.6)	51(86.4)	59 (100.0)		
Divorced	0(0.0)	9(100.0)	9 (100.0)		
Separated	10(41.7)	14(58.3)	24 (100.0)		
No of Children					
<3	20(45.1)	29 (54.9)	49 (100.0)	22.670	0.046*
3-5	60(27.5)	162 (72.5)	222 (100.0)		
>5	15(27.1)	63(72.9)	78 (100.0)		

*Significant

Table 4.6.1 Association between Selected Respondents Socio-Demographic Characteristics and their Attitude towards Cigarette smoking

N=349

Socio-Demographic Characteristics	Attitude		Total (%)	χ^2	p-value
	Negative (%)	Positive (%)			
Sex of Respondent					
Male	32 (14.8)	184 (85.2)	216 (100.0)	0.188	0.761
Female	22 (16.5)	111 (83.5)	133 (100.0)		
Age of Respondent					
<13	7 (15.7)	57 (84.3)	64 (100.0)	34.137	0.002*
13-15	19 (14.2)	117 (85.8)	136 (100.0)		
>15	28 (11.2)	121 (88.8)	149 (100.0)		
Area of Residence					
Rural	24 (15.3)	133 (84.7)	157 (100.0)	0.008	0.931
Urban	30 (15.6)	162 (84.4)	192 (100.0)		
Mother's Level of Education					
No formal education	5 (18.5)	22 (81.5)	27 (100.0)	1.975	0.578
Primary	5 (9.3)	49 (90.7)	54 (100.0)		
Secondary	26 (16.6)	131 (83.4)	157 (100.0)		
Tertiary	18 (16.2)	93 (83.8)	111 (100.0)		
Family Type					
Monogamous	41 (16.0)	216 (84.0)	257 (100.0)	1.210	0.751
Polygamous	10 (16.9)	49 (83.1)	59 (100.0)		
Divorced	1 (11.1)	8 (88.9)	9 (100.0)		
Separated	2 (8.3)	22 (91.7)	44 (100.0)		
No of Children					
<3	10 (13.5)	39(86.6)	49 (100.0)	21.289	0.067
3-5	37 (16.3)	185(83.7)	222 (100.0)		
>5	7 (24.2)	71(75.8)	78 (100.0)		

*Significant

Table 4.6.2 Association with the Selected Respondents' Socio-Demographic Characteristics and Prevalence of Cigarette smoking N=349

Variables	Ever Smoke		Total	χ^2	p-value
	Yes (%)	No (%)			
Sex of respondents					
Male	94 (43.5)	122 (56.5)	216 (100.0)	33.960	0.000*
Female	18 (13.5)	115 (86.5)	133 (100.0)		
Age					
<13	3 (3.5)	61(96.4)	64 (100.0)	80.225	0.000*
13-15	39 (26.5)	97 (73.5)	136 (100.0)		
>15	70 (66.0)	79 (34.0)	149 (100.0)		
Area of Residence					
Rural	66 (42.0)	91 (58.0)	157 (100.0)	12.995	0.000*
Urban	46 (24.0)	146 (76.0)	192 (100.0)		
Mother's Level of Education					
No formal education	11 (40.7)	16 (59.3)	27 (100.0)	21.655	0.002*
Primary	31(57.4)	23 (42.6)	54 (100.0)		
Secondary	40 (25.5)	117 (74.2)	157 (100.0)		
Tertiary	30 (27.0)	81 (73.0)	111 (100.0)		
Family Type					
Monogamous	83 (32.7)	173 (67.3)	256 (100.0)	0.602	0.896
Polygamous	19(32.2)	40 (67.8)	59 (100.0)		
Divorced	3 (33.3)	6(66.7)	9 (100.0)		
Separated	6(25.0)	18(75.0)	24 (100.0)		
No of children					
<3	18 (43.1)	31 (56.9)	49 (100.0)	31.493	0.003*
3-5	60 (27.6)	162 (72.4)	222 (100.0)		
>5	34 (37.8)	44 (62.3)	78 (100.0)		

*Significant

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Socio-Demographic Characteristics of Respondents

It was discovered in this study that about 69.6% of students in the age group 13-15 years are smokers as claimed that tobacco smoking remains a major public health concern particularly among young people similar to findings of Odukoya et al 2013. This is also in line with (WHO, 2012) that 1.1 billion people; representing one-third of the world's population above the age of 15 use tobacco particularly in form of cigarette. Of this 1.1 billion people, 700 million of them are males living in developing countries including Nigeria. In this study, respondents who were from rural homes (42.0%) smoked cigarette than those who resides in urban homes (24.0%). This result is consistent with other research that shows that tobacco use was strongly associated with adolescents living within a low socioeconomic status. Adolescents with low socio-economic status might have received more negative influence from smoking parents and other house hold members (Bird et al., 2016 and Rosen et al., 2014).

5.2 Respondents' Knowledge on the Dangers of Cigarette Smoking

Although, almost all of the student concluded that smoking is dangerous to health, only a few submitted that cigarette smoking shortens life span. This is contrary to the findings of (Erickson, Mac and Ross, 2017) which revealed that every year, tobacco is responsible for the deaths of an estimated 6 million people and is associated with one in ten adult deaths worldwide and tobacco smokers are believed to lose one decade of their life expectancy than those who never smoked (WHO, 2017). Furthermore, majority of respondents agreed that smoking causes heart disease which is in line with the study by WHO that smoking contributes to the global burden of diseases especially chronic non-communicable diseases including cardiovascular diseases, respiratory diseases, cancers, stroke and oral diseases.

The students showed a high level of understanding of the contents of cigarette with over 60% of them admitting that Nicotine is present in cigarette. This resonates with (ACS., 2013), that cigarette contains nicotine a highly addictive substance with about 80,000 to 100,000 young people around the world becoming addicted to tobacco each day. Majority

of the students had good knowledge of the various health problems associated with cigarette smoking. This is probably due to the fact that many of them have been educated in school about these harmful effects. Majority of them knew that lung cancer is associated with cigarette smoking, furthermore, majority of them agreed that cigarette smoking is implicated in heart disease. This showed that the adolescents were conversant with these health problems that result from smoking cigarettes.

This study also found out that 50.7% of respondents smoking behaviour was influenced by their peers and 9.2% of the respondents' smoking behaviour was influenced by their parents. This result confirms with a study conducted by Ebirim et al 2014; Adeyeye, 2011 and Babatunde et al. 2012 that their respondents' smoking behaviour was influenced by their friends and classmates. The study also found that 50.7% as against 24.1% indicated that their cigarette smoking habits were influenced by their peers and recreational activities. The result could be explained in the light of children who most of the time sees their parents as their role models and as such copy their behaviour. This finding is consistent with that of Adeyeye in 2011, that parents influenced their children's cigarette smoking behaviour.

5.3 Prevalence of Cigarette Smoking

The study also found that majority smokers are 13-15 years of age. It was also discovered that 83.9% of the male respondents were smokers while the remaining 16.1% were females. Although the number of female respondents were small, a previous study by Odey, Okokon, Ogbeche, Jumbo and Ekanem in 2012 also supports this finding, reporting that cigarette smoking was prevalent among adolescents in Calabar, Nigeria with more male respondents than female respondents. Similarly, the study recons with that of Adeyeye in 2011 which submits that cigarette smoking was low among the study population with more males than females engaging in the behaviour.

Other studies with similar findings included Fawibe and Shittu 2011 as well as Babatunde et al (2012) who also found smoking prevalence to be higher in male respondents than female respondents. However, the present study negates that of Taniwo and Oloyede in 2014 who found that the prevalence of cigarette smoking was fairly high among senior secondary school students in schools in Oyo State, Nigeria. This study also shed some light on the age of initiation of cigarette smoking, determinants and prevalence of cigarette

smoking among students of IBNLGA. Majority of the respondents started smoking at 13-15 years of age. The uptake of cigarette smoking among these respondents was as a result of different factors. The predictors however were peer influence and parents' smoking behaviour, siblings' smoking behaviour, relaxation, advertisements and recreation (Das, 2011 and Voorhes et al., 2011). These findings agree with other studies in Nigeria where males were more likely to smoke compared with females (Odukoya et al., 2013).

It was shown that peer influence (50.7%) was the strongest predictor of smoking followed by parents' smoking behaviour (9.2%). Consistent with the findings obtained in similar studies in many parts of Africa, the lifetime prevalence of smoking cigarette in this study is 69.6% which is higher compared to the mean lifetime smoking prevalence of 26.4% reported among secondary school students ranging from 7.2% to 42.9% (Odukoya et al., 2013). The prevalence of current smokers in this study was 97.3% which is similar to the study conducted by South- South Nigeria where the prevalence of current smokers 86.0% (Owonaro, Peter, Eniojukan and Joshua, 2015).

The level of education of the parents also affected the prevalence of smoking among the students. This is similar to the study conducted by Adeyeye in 2011 which found that there was a higher smoking rate among those students with well- educated fathers compared to those whose fathers had little or no education. This is also true for the mothers. High socio-economic class as reflected by parental occupation was significantly associated with cigarette smoking among the students.

5.4 Factors Responsible for Smoking in Respondents

From this study, less than half (36.4%) of respondents reported that they smoke because their friends smoke while 26.4% of respondents agreed that they smoke because their parents smoke. Consistent with other findings, it was shown that peer influence (21.9%) was the strongest predictor of smoking followed by exposure to advertisements (8.0%), and then the smoking status of relatives (7.2%) and parents (3.5%) (Abiola et al., 2016). Studies show that adolescents with one or both parents who are smokers are associated with initiation of smoking (Ali et al., 2010). However, the reason why peers influence was the major predictor of smoking in this study could be as a result of negligence on the part of the parents and the environment of the respondents.

Findings from this study showed 31.5% of the respondent agreed that smoking brings comfort during celebrations/social activities. This is consistent with the findings that 32 (8%) of the respondents that smoke is as a result of exposure to television advertisements, this is because glorification of smoking in films has a potential to influence smoking initiation among the youth (Odukoya et al., 2013).

5.5 Attitude of Respondents towards Cigarette smoking

This study revealed that 63.0% of the respondents agreed that smoking should be banned in public places. This finding is much higher than that reported by another study conducted in north east Nigeria where about half of respondents wanted smoking in public places banned (Salawu et al, 2009). The study also reported that 22.1% will leave a place where cigarette is being smoked. This is lower than the study conducted by Mansur et al in 2013 where more than half of the respondents in the study group reported that they would leave a place where cigarette is being smoked.

5.6 Implications to Health Promotion and Education

The results of this study lend its voice to other study finding to scale up health promotion and education intervention that directly target young people. This study found that the knowledge of respondents was good and only few had poor knowledge with existing misconceptions. This finding necessitates training to improve their knowledge and dispel misconceptions. The training programs could be in form of seminars and debates in schools in order to effectively prepare them for the future ahead of them.

According to World Health Organization, 1.1 million people; representing one- third of the world's population above the age of 15 use tobacco particularly in form of cigarette. Another study revealed that less than half of the students surveyed in the 2008 GYTS in Lagos State had been taught in school about the dangers of cigarette smoking (Ekanem, 2010). Students therefore require education on the dangers of smoking cigarette; this which can be channelled into their school curriculum using brainstorming, discussion, debates, use of posters and dramas.

Finally, the efforts of government through the collaboration of the Federal Ministries of Health, Education and Non-Governmental Organizations dealing with issues on adolescents

should be geared towards psycho-active drug use education including cigarette smoking for in-school adolescents which would effectively prepare them for adulthood.

5.7 Conclusion

There was a low prevalence of cigarette smoking among secondary school students in Ibadan North Local Government Area of Oyo State. The cigarette habits of the students were influenced by their peers and parents/guardians. The findings indicated that students have good knowledge of harmful effects of smoking. The study also found that majority of the students believe that they should not be involved with the habit of smoking and that boys who smoke are more than girls who smoke. Although students from rural areas have more smokers among them than the ones in the urban areas there is no significant difference in the knowledge of both categories on the harmful effects of smoking.

5.8 Recommendations

The following recommendations are made in view of the attitude, knowledge and prevalence of cigarette smoking among secondary school students in Ibadan North Local Government Area, Oyo state, Nigeria:

1. Adolescents' peer education, school-based enlightenment activities and other co-curriculum programmes are needed to discourage the in-school adolescents against cigarette smoking.
2. Counsellors should also assist the students to overcome their cigarette smoking habits by initiating a 'non- smokers club' in the school, so that the students' interests and energies would be diverted to more meaningful educational ventures such as debates; and awarding prizes to students who declare that they have overcome cigarette smoking. These set of students could serve as models to the other students and lead the campaign against cigarette smoking in school, using fliers and posters.
3. A sensitization seminar should be planned by counsellors, by inviting the medical personnel to the institutions to speak to the students and their parents, particularly counselling parents and guardians to be good role models; emphasizing how the smoking habits impact negatively on their children. Furthermore, the medical

personnel would be able to give an insight into the dangers of smoking cigarettes that may give rise to preventable deaths from diseases such as lung cancer, heart disease, asthma amongst many others.

4. Radio, television and social media should be used to disseminate factual information relating to the adverse effect of cigarette smoking. The campaign against the dangers inherent in cigarette smoking should be intensified through the news and print media by government and they should place a total ban on the sales of cigarettes.

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QUESTIONNAIRE

KNOWLEDGE, ATTITUDE AND PREVALENCE OF CIGARETTE SMOKING AMONG SECONDARY SCHOOL STUDENTS IN IBADAN NORTH LOCAL GOVERNMENT AREA, OYO STATE, NIGERIA.

INTRODUCTION

My name is **Adijat Olabisi Elias**, a Masters of Public Health Student from the Department of Health Promotion and Education, University of Ibadan. I am carrying out a study titled, **KNOWLEDGE, ATTITUDE AND PREVALENCE OF CIGARETTE SMOKING AMONG SECONDARY SCHOOL STUDENTS IN IBADAN NORTH LOCAL GOVERNMENT AREA, OYO STATE, NIGERIA.**

You are therefore invited to participate in this research, participation involve providing answers to the question below. Information provided will be kept confidential and used for research purposes only. This questionnaire would be self- administered for proper data collation.

Also, the research is risk free and participation is entirely voluntary.

Thanks for your cooperation.

Instruction: this questionnaire is mainly for research purpose. Information you give would be confidential. You do not have to write your name please. Tick and fill as applicable. Thank you.

I consent/willingly agree to participate in this study:

Signature/Date.....

Name of School..... Id No

SECTION A: SOCIO-DEMOGRAPHIC CHARACTERISTICS

1. **Age at last birthday:**
2. **Sex:** 1. Male () 2. Female ()
3. **Religion:** 1. Islam () 2. Christianity () 3. Traditional ()
4. Others (specify)
4. **Ethnic Group/Tribe:** 1. Yoruba () 2. Igbo () 3. Hausa () 4. Others (Specify)
5. **Class:**
6. **Mother's Level of Education:**
 1. No Formal Education ()
 2. Primary ()
 3. Secondary ()
 4. Tertiary ()
7. **Father's Level of Education:**
 1. No Formal Education ()
 2. Primary ()
 3. Secondary ()
 4. Tertiary ()
8. **Mother's Occupation:**
 1. Civil servant ()
 2. Trader ()
 3. Banker ()
 4. Artisan ()
 5. Farmer ()
 6. Others (specify).....
9. **Father's Occupation:**
 1. Civil servant ()
 2. Trader ()
 3. Banker ()
 4. Artisan ()
 5. Farmer ()
 6. Others (specify).....

10. **Family Type:**
1. Monogamous ()
 2. Polygamous ()
 3. Divorced ()
 4. Separated ()
11. **Number of children in the family:**
12. **Position in the family:**
13. **Area of Residence:** 1. Rural () 2. Urban ()

SECTION B: KNOWLEDGE ON THE DANGERS ASSOCIATED WITH CIGARETTE SMOKING

14. **Mention Three (3) Main substances present in Cigarette**
1. Nicotine ()
 2. Tar ()
 3. Carbon (11) Oxide ()
 4. Menthol ()
 5. Others (Pls Specify).....
15. **Mention three (3) dangers/ diseases associated with cigarette smoking.**
1. Lung cancer ()
 2. Heart disease ()
 3. Asthma Attack ()
 4. Healthy Brain ()
 5. Others (specify)
16. **why do you think people smoke cigarette?**
1. Recreation ()
 2. Relaxation ()
 3. Peer Acceptance/Influence ()
 4. Parent Smoking Behavior ()
 5. Others (Pls Specify).....

INSTRUCTION: FOR EACH QUESTIONS RELATING TO STUDENTS' KNOWLEDGE ON THE DANGRS ASSOCIATED WITH CIGARETTE SMOKING. PLEASE () AS APPROPRIATE.

	Statements	Yes	No
17	Cigarette smoking is dangerous to your health		
18	Cigarette smoking causes heart disease		
19	Smoke from another people's cigarette is harmful		
20	Cigarette smoking does not shorten life span		
21	Cigarette smoking triggers asthma attack		
22	Cigarette smoking does not cause lung cancer		
23	Cigarette smoking cannot result into low academic performance		

SECTION C: FACTORS INFLUENING SMOKING BEHAVIOR IN ADOLESCENTS

	Statements	Agree	Undecided	Disagree
24.	Smoking helps me fit in with other people			
25.	Smoking makes me feel more confident			
26.	I smoke because my friend smoke			
27.	Smoking is something to do when you are bored			
28.	Smoking makes me feel less worried			
29.	Smoking is pleasurable			
30.	Smoking makes me feel more relaxed			
31.	Smoking gives me a sense of maturity			
32.	Smoking is affordable and within reach			
33.	Smoking brings me comfort during celebrations/ social activities			
34.	I smoke because my parent smoke			

SECTION D: PREVALENCE OF CIGARETTE SMOKING AMONG STUDENTS IBNLGA

35. Do you smoke? 1. Yes () 2. No ()
36. If No, Move to Question 40

37. Age of Initiation of smoking:
38. Do you still smoke cigarette? 1. Yes () 2. No ()
39. How often do you smoke in a week?
1. Daily ()
 2. Once a week ()
 3. Twice a week ()
 4. More than three times a week ()
40. Do you have friends who smoke around you? 1. Yes () 2. No ()
41. Do you have family members who smoke? 1. Yes () 2. No ()
42. If Yes, Specify if NO, Move to Question 43
43. Where is your greatest source of exposure to smoking?
1. Radio ()
 2. Television ()
 3. Music videos ()
 4. Social media ()
 5. Parents ()
 6. Brothers/ Sisters ()
 7. Uncle ()
 8. Peers ()
 9. Others (Pls Specify)
44. When last were you around someone who smoked?
1. Today ()
 2. A week ()
 3. Two weeks ()
 4. Other (Pls Specify).....
45. How long do you stay with people while they smoke?
1. Less than an hour ()
 2. 1-4 hours ()
 3. Greater than 4 hours ()
 4. Others (pls Specify)

SECTION E: ATTITUDE OF STUDENTS TOWARDS CIGARETTE SMOKING

	Statements	Agree	Undecided	Disagree
46.	Students should distance themselves from people who smoke			
47.	It is good to associate with people who smoke			
48.	Smoking is an offensive act			
49.	Smoking should be banned in public places			
50.	Most students are ignorant about the adverse effect of smoking; hence, they readily associate with students who smoke			
51.	If a student's friend or relatives are gathering to smoke, he or she should join them in smoking rather than be alone			
52.	People should not smoke in their cars			
54.	Associating with friends who smoke will not bother you			

Thank you for the time spent with me.

INFORMED CONSENT

INFORMED CONSENT FORM FOR PARENTS/GUARDIANS

Research approval number:

This approval will elapse on:

Title of the research: Knowledge, Attitude and Prevalence of Cigarette Smoking Among Secondary School Students in Ibadan North Local Government Area, Oyo State, Nigeria.

This study is being conducted by Adijat O. Elias of the Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, Oyo State, Nigeria. The purpose of this study is to investigate the knowledge, attitude and prevalence of cigarette smoking among secondary school students as well as their view regarding cigarette smoking.

I will be recruiting 349 Participants into the study which they will be randomly selected from secondary schools in Ibadan North Local Government Area using a multi-stage sampling technique. An interviewer will administer questionnaires to your child/children in their classrooms and will be collected back after they have been filled. The interviewer and other participants will be present during the interview. Each interview will take about 30 minutes to 45 minutes. There are no physical risks associated with participation in this study. However, your child/children may be uncomfortable with some of the questions he/she will be asked. But, he/she may decide not to answer any questions he/she may feel uncomfortable about.

Your Child's /children's participation in this research is absolutely voluntary and will not cost you anything. There are no direct and immediate benefits for participation in this study. Your child's/children's participation in this study may provide the basis for the assessment of cigarette smoking among students and the optimization of existing policies on tobacco use.

You are also expected to state below whether your child/children should be allowed to participate in this study.

All information collected cannot be linked to your child in any way as his/her name will not be collected. As part of my responsibility only the researcher, members of the researcher's staff and representatives from the Oyo State Ethical Review Board may have access to study records. They are required to keep your child's/children's identity confidential. Results of this study may be used for research publications, or presentations at scientific meetings, but your child's / children's results will never be discussed as an individual. No identifying information will be kept on the actual survey form so nobody will be able to connect your child's/children's name to the survey.

Statement of person giving consent:

Now that the study has been well explained to me and I fully understand the content of the study process, I hereby agree to allow my child/children to be part of the study.

DATE: _____ SIGNATURE _____

NAME: _____

Detailed contact information

This research has been approved by the Ethics Committee of the Oyo State Ministry of Health and the Chairman of this Committee can be contacted through The Secretary, Oyo-State Ethical Review Committee, Ministry of Health, Secretariat, Ibadan. In addition, if you have any questions about your participation in this research, you can contact the principal investigator, Adijat O. Elias at the Department of Health Promotion and Education, University College Hospital Ibadan. The Phone and e-mail address are 07034735764 and eliasolabisi@yahoo.com. You can also contact the Supervisor of this project, Dr. Titiloye, M.A. on telephone number 08033775285 or at the Department of Health Promotion and Education, University College Hospital Ibadan.