Knowledge of the negative effect of Cigarette Smoking among adult in sokoto metropolis

[1] Ikpeama Osita John, [2] Onuzulike Nonye Mariam, [3] Okafor Patrick Adimabua, [4] Ikpeama Chizoba Anthonia, [5] Ikpeama Chinwe Joy, [6] Igbineweka Osa Osazuwa, [7] Ikpeama Emeka Andrew, [8] Ofuenyi Jacob, [9] Nwosu Nchedochukwu Paulastella, [10] Ibeh Isaiah Nnanna, [11] Gerald Chukwudi Mokwe

[1. First Author & Corresponding Author] Department of Public Health, Imo State University, Owerri. Tel: +80-6261-9025, E-mail: Ikpeama35@Gmail.Com

[2] Department of Public Health, Imo State University, Owerri

[3] School of Medical Laboratory Sciences, Ahmadu Bello University, Zaria, Kaduna State, Nigeria[2] ,

[4] Federal Medical Centre, Kebbi State,

[5] Medicine San Frontires,

[6] Department of Periodontology and Community Detistry, University College Hospital, Ibadan[5],

[7] Anatomy Department Anambra State University Uli,

[8] Livon Medical Diagnostic Laboratory Service. No 1 Cold Room Street, Beside Maddala Hotel, Niger State

[9] New Salvation Medical Centre, Sapele Delta State,

[10] Department Of Medical Laboratory Sciences, University Of Benin[9] ,

[11] Altinez Pharmaceutical Ltd 8 Obukun Street, Off Coker Road,Ilupeju, Lagos.

Abstract

This study was aimed at ascertaining the level of knowledge of the health effects of cigarette smoking on health and wellbeing among adults. A cross-sectional form of descriptive survey research design was used for this study. Two hundred and seventy copies of the questionnaire collected were analyzed using descriptive statistic of frequency count, normative percentage and grand mean; as well as inferential statistics of chi-square ($\chi2$). The level of significant was fixed at 0.05. Appropriate degrees of freedom were worked out. The influence of gender on the knowledge of the negative effect of cigarette smoking among adults in sokoto. The results shows that 48% agreed on the negative effects of showing among male followed by 29.3% among female, those who undecided 8.8% male and 4.4% females while those who disagree are 6.2% for male and 2.5% for female. The research concluded that the knowledge of negative effect of cigarette smoking among adults in sokoto metropolis was very good across the different variable (marital

status, gender, and year in higher institution) with single, male and first year in higher institution showing significantly good knowledge of the negative effect of cigarette smoking.

Keywords: Cigarette Smoking, Gender, Years in Higher Institution, Knowledge, Marital Status

Major classification: Health Science.

1. Introduction

Smoking is the inhalation and exhalation of fumes form a substance (of abuse) used in various forms. The different forms or methods of smoking include cigar, cigarettes and pipes etc. (Ygoy Health community, 2010). Smoking accounts for almost 400,000 deaths annually in The United States of America (USA), approximately 100,000 deaths in The United Kingdom (UK) and 4.9 million around the globe. Additionally, smoking accounts for 12-13% of life years lost in the industrialized countries. About 25% of smokers fail to quit smoking die on the average of 20 years earlier as compared to non-smokers and the people who smoke 20 cigarettes in a day have higher incidence of deaths. Additionally, disability adjusted life years (DALY) are lower among smokers as compared to non-smokers (West & Schiffman, 2007). According WHO, in 2012, people of age 15 or above constituted 21% of the total population around the globe. Men smoke five times higher as compared to women, and average smoking rate for male was 36% whereas it was only 7% for the females. Likewise, men in Western Pacific region has higher rate of tobacco usage (48%) where as highest smoking prevalence among females is noted in European region which is 19%. Smoking prevalence among the adolescent girls (aged between 13-15 years) covers 8% of all the smokers globally, however this average doesn't cover the smoking adolescent girls in European and African region due to unattainability of data for comparison. In WHO regions of Americas, this average has been seen on its peak, where 14% of adolescent girls are smokers. From this it can be assessed that smoking rates among adolescent girls are higher in those countries where there are minimal laws against tobacco. On the other hand, smoking rates among boys (aged between 13-15 years) in Eastern Mediterranean region and South-East Asia region are higher as compared to the rest of the world, and their rate of smoking has been recorded at more than 20% (WHO, 2016). Harris (1999) opined that present knowledge that the habit of tobacco smoking is usually taken up during adolescence and early adulthood. Additionally, some researchers suggested a link of various psychological pathologies with smoking. Peer pressure and an image of high status lifestyle models also encourage smoking. Since teenagers and early adults (university students) are more influenced by peers and life style models, they are more prone towards smoking (Stanton & Silva, 1992; Paton, Hibbert, Rosier, Carlin, Caust, & Bowes, 1992; Harris, 1999). Smoking among medical doctors is an important issue in public health sector. Besides of this, tobacco usage is a perilous international issue in public health sector for public health policy makers. WHO categorizes smoking as the second major cause of death and fourth utmost health hazard for many diseases all around the world. If this smoking trend is not stopped by 2020 then it can result into 650 million deaths overall (Smith & Leggat, 2007). According to the International Labor Organization (ILO), smoke free work place should be promoted as this is one of the main steps for healthy and safe work environment. Tobacco usage is a very serious occupational issue among the medical professionals. According to a review including 81 studies over 30 years (1974-2004)

regarding tobacco smoking, tobacco usage varies all around the world among medical professionals, in fact this trend is not uniformly low. In a nutshell, smoking prevalence should be decreased in the near future among physicians, so that physicians can play their role efficiently in anti-smoking campaigns and cessation programs (Smith & Leggat, 2007). Cigarette smoking is said to be responsible for over 25 diseases in humans some of which include chronic bronchitis, ischaemic heart disease and cancers of the lung, oral cavity, urinary bladder, pancreas, and larynx (Atawodi, Preussmann, & Spiegelhalder, 1995; Desalu, Olokoba, Danburam, Salawu, & Issa, 2008). Cigarette smoking has also been implicated either as a contributory factor or causal agent in the following health conditions: osteoporosis, blindness, impotence, loss of teeth, diabetes, reduced fertility, cataracts, asthma, reduced sperm count, fungal eye infection, early menopause, stomach ulcers, cardiovascular heart diseases, reduced lung function, reduced lung growth, and atherosclerosis (Fakoya, 2010; U.S. Department of Health and Human Services, 2012). Smokers also face a much greater risk of premature death than non-smokers, (U.S. Department of Health and Human Services, 2012; Hammond & Horn,1988). Unfortunately, these health implications are not the exclusive preserve of active smokers but are also shared by passive or second-hand smokers, (U.S. Department of Health and Human Services, 2012; Eriksen, 1988; Humble, 1990). There are suggestions based on research that smoking tends to cause cognitive decline and results in the loss of grey matter tissue in the brain with time (Almeida, 2011). At the end of the twentieth century, deaths from smoking related illnesses had risen to 4 million a year worldwide and projections indicate that this could rise to 10 million a year by 2030 (U.S. Department of Health and Human Services, 2012). Though there are convincing evidences to support the negative health effects of cigarette smoking, it has been found that knowledge about the health hazards of smoking has not always served to prevent people from smoking (Hussain, Akande, & Adebayo, 2009). Smokers' low perception of the negative effects of their smoking behavior on their health also results in many of them being unwilling to quit smoking (Fawibe & Shittu, 2011). A possible explanation for this attitude could be that most tobacco users are not fully aware of the harms caused by tobacco use WHO (2011), hence their underestimation of the ill-effects of smoking.

1.1. Purpose/objectives of the study

This study was aimed at ascertaining the level of knowledge of the health effects of cigarette smoking on health and wellbeing among adults male/female in sokoto metropolis aged between 18 to 40 years in sokoto metropolis. In specific terms, the objectives of the study include:

1. to determine the level of knowledge of negative effect of smoking possessed by adults male and female in respondent.
2. to ascertain the influence of marital status on the level of knowledge of negative effect of smoking possessed by adults in sokoto.
3. to determine the influence of years of higher institution on the knowledge of negative effect of smoking possessed by adults in sokoto.

1.2. Significance of the study

Results of the study would reveal level of knowledge of negative effect of adult male/female ofsmoking. Specifically, result of the study would be significant to adults (male /female), Public health officers, health counselors, health educators, curriculum planners, medical personnel (clinician, nurses, pharmacist and clinical laboratory scientist) and researchers in assessing levels of knowledge of negative effect of smoking by respondents. Results of the study would motivate public health workers toward identifying gap and developing palliative measure aimed at preventing negative lifestyle like smoking in this locality. Health counselors would through the results of the study develops and adapts effective client counseling method on the best healthy life style to adopt. Health educators, curriculum planners and researchers would be able to identify gaps in knowledge that can aid in the development of health education and health promotion concepts that can be utilized in the community to address the deficiencies.

1.3. Research Questions

The following research questions gave direction to the study.

1. What is the influence of gender on the knowledge of negative effect of smoking possessed by adult's male/female in sokoto?
2. What is the influence of marital status on the knowledge of negative effect of smoking among adult's in sokoto ?
3. What is the influence of years of higher institution on the knowledge of negative effect of smoking possessed by adults in sokoto?

1.4. Hypotheses

The following null hypotheses were postulated for the study

1. There is no significant difference among adults male/female in sokoto metropolis on their level of knowledge of negative effect of smoking.
2. There is no significant difference among different marital status on their level of knowledge of negative effect of smoking.
3. There is no significant difference in the year of higher institution of knowledge of negative effect of smoking possessed by adults in sokoto.

1.5. Scope of the study

The study was delimited to the level of knowledge of negative effect of smoking among adult's male/ female (18-40years) in tertiary institution in sokoto metropolis. It was delimited to independent variables of gender, marital status and year in higher institution. It was further delimited to adults(18-40years) in sokoto. It involved young adult age (18-40) years. It was delimited to the use of structured interview guide as the main instrument for data collection. Finally it was delimited to the use of descriptive statistic of frequency and percentage as well as inferential statistic of chi square at 0.05 level of significant for data analysis.

2. Research design

A cross-sectional form of descriptive survey research design was used for this study. This is because descriptive studies are used when the characteristics of a population are either unknown or partially known (Hennekens & Buring, 2007), and it was used by Ganley and Rosario (2013) in a related researchthis justified the use of similar design in a study of similar nature.

2.1. Area of the study

Sokoto is one of the seven states that form the North West geopolitical zone of Nigeria. It is bordered to the north by the Republic of Niger, Zamfara State to the east, Kebbi state to the south and west. It is situated in the savannah on the temperature of 44 degree Celsius annually. The city of Sokoto is its capital. Sokoto state traces its origin to the Sokoto Caliphate founded in 1809 by ShehuUsmandanFodio, the leader of the jihadists who overthrew the Hausa state of Gobir, Kano, Katsina and Kanem-Bornu. The empire fell after the British conquest of 1903 and the death of Attahiru, the Sultan of Sokoto, and became part of the Northern Region in the three-region structure of 1954. In 1967, Nigeria, the military administration of General Yakubu Gowon merged Sokoto and Niger provinces to form the North Western state. In 1976, North Western State was spilt into Sokoto and Niger states by the military administration of General MurtalaMuhammed.SokotoState covers an area of 28,232.37 square kilometers. The state is located between latitudes 40 to 60 north and longitudes 110 to 130 east has a population of 3,702,676 (2006 census figures). It accounts for 2.3 percent of Nigeria's total population. Prior to the establishment of Sokoto as a ribat (military camp or frontier) in 1809, the area that is modern-day Sokoto state was home to Hausa state with large populations. These states eventually fell under the control of UsmandanFodio and the Fulani jihadists and became part of the SokotoCaliphate. In 1817 when Usman died, his son Muhammed Bello succeede him as the Sultan of Sokoto.Usman's brother Abdullahi was given the western divisions of the caliphate to run; however, supreme authority rested with Bello. At the height of its power, the Sokoto Caliphate extended as far as Ilorin (in modern-day kwara State). The Hausa are the largest ethnic group in Sokoto State while the Fulani are its second largest. Minority include the Zabarmawa, Tuareg and the Dakarkari. The majority of the population is Sunni Muslim. There is a small Shia minority. There are twenty-three local government areas (LGAs) in Sokoto. Each has a chairman as its administrative head. The Islamic community in Nigeria considers the person of the Sultan as 'First among Equals'. He is both the political head of the Fulani as well as the supreme spiritual head of the rough 70 million Muslims in Nigeria. Currently occupying the sit is Sultan MuhammaduSa'adAbubakar III, the twentieth sultan of Sokoto. Agriculture is the mainstay of Sokoto's economy. The riverine floodplains produce cash crops, including peanuts (groundnuts), cotton and rice. Sorghum, millet, cowpeas and cassava are grown in the upland areas. Much of the land in the state is used for grazing cattle. Cattle hides, goatskin, sheepskins and finished leather products are significant exports, as are cattle, goats and fowl. The state possesses limestone and kaolin deposits and Sokoto City, the state capital, is home to a cement factory, tanneries and a modern abattoir. Festivals includeKalankuwa, Halbi, Sharo, AikinGawa, Shan Gumba-Pap drinking and Remo Fishing Festival. The stress associated with agriculture could increase the incidence of hypertension. The trend of cigarette smoking is very high among adult in sokoto metropolis (Nigeria socio-economic indicator, 2012).

2.2. Population of the study

The accessible population of the study consisted of an estimated two thousand (3000) adults (male/female) (18-40 years) adults in sokoto state.

2.3. Sample/sampling technique.

The sample for the study consisted of 300 (three hundred) adults' male/female randomly drawn areas in sokoto metropolis. Ten percentage (10%) of the accessible population was used as sample size, Nwana (2011) opined that if the population is in few thousand 10% will be appropriate as the sample size.

2.4. Instrument for data collection

The main instrument for data collection consisted of structured interview guide. The structured interview was in three sections A, B and C. Section A, was made up of three questions on demographic data (sex, marital status and years in tertiary istitution) in tertiary institution in sokoto metropolis. All the six (6) questions were closed ended.

2.5. Validity of the instrument

The draft of the structured interview guide was approved by the research supervisor and validated by three lecturers in Department of Public Health of Imo state University, Owerri. The validators were requested to examine the content of the instrument in line with the objectives of the study to ascertain clarity and ability to elicit appropriate responses for the study. Modifications were made following validators comments.

2.6. Reliability of the instrument

Split-half method was used in establishing the reliability of the instrument. Twenty (20) copies of the instrument were distributed once to twenty adults in city campus area in sokoto metropolis. A result of the single administration was divided into two equal halves using odd and even numbers. Cronbach alpha correlation co-efficient will be used in ascertaining the correlation co-efficient. Using cronbach alpha correlation 0.79 was obtained. This showed a high positive correlation and thus regarded as reliable as shown in appendix C.

2.7. Method of data collection

A letter of approval (Appendix D) signed by the Head of Department of Public Health Imo State University, Owerri enabling the administration of the questionnaire to the respondents to allow entry for data collection.

2.8. Method of data analysis.

Data collected were analyzed using descriptive statistic of frequency count, normative percentage and grand mean; as well as inferential statistics of chi-square ($\chi 2$). The level of significant was fixed at 0.05. Appropriate degrees of freedom were worked out.

Ikpeama Osita John, Onuzulike Nonye Mariam, Okafor Patrick Adimabua, Ikpeama Chizoba Anthonia, Ikpeama Chinwe Joy, Igbineweka Osa Osazuwa, Ikpeama Emeka Andrew, Ofuenyi Jacob, Nwosu Nchedochukwu Paulastella, Ibeh Isaiah Nnanna, Gerald Chukwudi Mokwe / Korean Journal of Food & Health Convergence 5(2), pp.13-26.

3. Result

Two hundred and seventy copies of the questionnaire returned out of three hundred were analyzed using descriptive statistic of frequency count, normative percentage and grand mean; as well as inferential statistics of chi-square ($\chi2$). The level of significant was fixed at 0.05. Appropriate degrees of freedom were worked out.

Research question 2: What is influence of marital status on the knowledge of the negative effect of cigarette smoking among adults in sokoto metropolis?

Hypotheses 2: There is no significant difference in the marital status on the knowledge of the negative effect of cigarette smoking among adults in sokoto metropolis.

Table 1: Distribution of respondents based on gender.

Female n(%) undecided / disagree	Male n(%) Agree	undecided	disagree	Agree	Female undecided	Female disagree
Smoking causes lung malignancy	130(48)	30(11)	10(3.7)	91(34)	4(1.5)	5(1.9)
Smoking causes pulmonary (COPD, Bronchitis,emphysema)	140(52)	20(7.4)	10(3.7)	88(33)	6(2.2)	6(2.2)
Smoking causes malignancy Of breast, urinary bladder.	148(55)	17(6.3)	5(1.9)	86(32)	7(2.6)	5(1.9)
Smoking causes hypertension.	107(40)	45(17)	18(6.7)	81(30)	5(1.9)	4(1.5)
Smoking causes stroke and Brain damage.	120(44)	20(7.4)	30(11.1)	60(22)	30(11.1)	10(3.7)
Smoking causes genetic disease in Children.	132(49)	10(3.7)	28(10.3)	70(30)	20(7.4)	10(3.7)
Grand total	777	142	101	476	72	40
Grand average	129.5	23.7	16.8	79	12	6.7
Percentage	48	8.8	6.2	29.3	4.4	2.5

$\chi2=133.6037$, critical value $=37.65$; df=25, $p<0.05$

Table 1 above represent influence of gender on the knowledge of the negative effect of cigarette smoking among adults in sokoto. The results shows that 48% agreed on the negative effects of showing among male followed by 29.3% among female, those who undecided 8.8% male and 4.4% females while those who disagree are 6.2% for male and 2.5% for female. When the data were subject to chi-square analysis to test whether there is significant difference between male and female respondents. There is a statistical significant chi-square 133.6037 which is greater and the critical value $=37.65$;df$=25$,$p<0.05$.The male respondents had good knowledge of the negative effect of cigarette smoking. Therefore, male had significantly good behavioral practices than the female gender.

Research question 2: What is influence of marital status on the knowledge of the negative effect of cigarette smoking among adults in sokoto metropolis?

Hypotheses 2: There is no significant difference in marital status on the knowledge of the negative effect of cigarette smoking among adults in sokoto metropolis.

Table 2: Distribution of respondents based on marital status

	Married n(%)			Single n(%)		
	Agree	undecided	disagree	Agree	undecided	disagree
Smoking causes lung malignancy	62(23)	11(4.1)	4(1.5)	169(62)	3(1.1)	21(8.2)
Smoking causes pulmonary (COPD, Bronchitis,emphysema)	62(23)	10(3.7)	5(1.9)	167(62)	3(1.1)	23(5.5)
Smoking causes malignancy Of breast, urinary bladder.	62(23)	8(3.0)	7(2.6)	169(63)	11(4.1)	13(4.8)
Smoking causes hypertension.	62(23)	1(0.3)	14(5.2)	168(62)	2(0.7)	22(8.1)
Smoking causes stroke and Brain damage.	70(26)	3(1.1)	4(1.5)	140(52)	20(7.4)	33(12.2)
Smoking causes genetic disease in Children.	62(23)	4(1.5)	11(4.1)	139(51)	20(7.4)	35(13)
Grand total	380	37	45	952	39	147
Grand average	63.3	6.2	7.5	159	6.5	24.5
Percentage	23.7	2.5	2.8	59	2.4	9.1

$\chi 2=84.859$, critical value=37.65;df=25,p<0.05

Table 2 above represent influence of marital status on the knowledge of the negative effect of cigarette smoking among adults in sokoto. The results show that the level of knowledge by respondent was 23.7% agreed, 2.5% undecided, 2.8% disagree among married while among single 59%, 2.4% and 9.1% agree, undecided and disagree respectively. When the data were subject to chi-square analysis to test whether there is significant difference between married and singles respondents. They were statistically significant influence of marital status on the knowledge of health implication of smoking chi-square 84.859 is greater than the critical value 37.65 at df =25.Therefore, the null hypotheses were rejected and conclusion drawn that there is a significant difference between is influence of marital status on the knowledge of the negative effect of cigarette smoking among adults. Singles had good knowledge of the negative effect of cigarette smoking.

Research question 2: What is influence of years of higher institution on the knowledge of the negative effect of cigarette smoking among adults in sokoto metropolis?

Hypotheses 2: There is no significant difference in the years of higher institution on the knowledge of the negative effect of cigarette smoking among adults in sokoto metropolis.

Table 3: Distribution of respondents based on their years in the tertiary institution.

	First year n(%)			second year n(%)			third year n(%)			fourth year n(%)		
	Agree	undecided	disagree	Agree	undecided	disagree	Agree	undecided	disagree	Agree	undecided	disagree
Smoking causes lung malignancy.	138(51)	12(4.4)	12(4.4)	44(16.3)	3(1.1)	1(0.3)	40(15)	0(0)	0(0)	14(5.2)	1(0.3)	5(1.9)
Smoking causes pulmonary (COPD, Bronchitis, emphysema)	139(51)	11(4.1)	12(4.4)	44(16)	2(0.7)	2(0.7)	31(11.5)	2(0.7)	7(2.6)	19(7.0)	1(0.3)	0(0)
Smoking causes malignancy Of breast, urinary bladder.	140(52)	10(3.4)	12(4.4)	41(15.2)	7(2.6)	1(0.3)	31(11.5)	2(0.7)	7(2.6)	15(5.6)	5(1.9)	0(0)
Smoking causes hypertension.	146(54)	10(3.7)	11(4.1)	43(16)	0(0)	5(1.9)	30(11.1)	0(0)	10(3.7)	19(7)	1(0.3)	0(0)
Smoking causes stroke and Brain damage.	150(56)	6(2.2)	6(2.2)	41(15.2)	0(0)	7(2.6)	25(9.3)	11(4.1)	4(1.5)	20(7.4)	0(0)	0(0)
Smoking causes genetic disease in children	160(59)	2(0.7)	0(0)	42(15.6)	5(1.9)	1(0.3)	25(9.3)	10(3.7)	5(1.9)	20(7.4)	0(0)	0(0)

Grand total			873	51	53	225	17	17	182	25		
33	107	8	5									
Grand average			145.5	8.5	8.8	42.5	2.8	2.8	30	4.2		
5.5	18	1.5	0.8									
Percentage			54	3.1	3.3	15.7	1.0	1.0	11.2	1.6		
2.0	6.7	0.5	0.3									

χ2=136.2464, critical value=73.311;df=55,p<0.05

Table 3 above represent years of higher institution on the knowledge of the negative effect of cigarette smoking among adults in sokoto. The results show that the level of knowledge measured in percentage showed that in first year student 54%, 3.1% and 3.3% agree, undecided and disagree respectively, second year student 15.7, 1.0 and 1.0 agree, undecided and disagree respectively. Among third year student 11.2, 1.6 and 2.0 agree, undecided and disagree respectively, while fourth year student 6.7, 0.5 and 0.3 agree, undecided and disagree respectively on the knowledge of the negative effect of cigarette. When the data were subject to chi-square analysis to test whether there is significant difference between different year in higher institution. There is a statistical significance difference or relationship between the year in higher institution and the knowledge of negative effect of cigarette smoking, chi-square 136.2464 which is greater and the critical value 73.311 rejecting the null hypothesis. Therefore, first year student had significantly good knowledge of the negative effect of cigarette smoking among adults in sokoto.

4. Discussion

Knowledge of negative effect of smoking based on gender shows that 130(48%) male and 91(34%) female agreed, smoking causes malignancy 10(3.7%) male and 6(2.2%) disagree, 30(11%) male and 4(1.5%) are undecided. Smoking causing pulmonary disease shows that 140(52%) male and 88(33%) female agreed while 10(3.7%) male and 6(2.2%) female, while male 20(7.4%) and female 6(2.2%) are undecided. Smoking causing malignancy of breast, urinary bladder 148(85%) male agreed, 86(32%) female agreed while 5(1.1%) each for male and female respectively. Smoking causing hypertension 107(40%) male agreed and 81(30%) female agreed, those who disagreed 18(6.7%) male and 4(1.5%) female while those who are undecided 45(17%) male and 5(1.9%) female. Smoking causing stroke and brain damage 120(44%) male and 60(22%) female agreed respectively, while those who disagree are 10(3.7%) female, 30(11.1)while those who are undecided were 20(7.4) male and 30(11.1%)female. Smoke causing genetic disease 132(49%), 10(3.7) and 20(10.3%) agreed, undecided and disagreed respectively while among the female 70(30%), 20(7.4%) and 10(3.7%) agree, undecided and disagree that smoking causes genetic disease. According WHO, in 2012, people of age 15 or above constituted 21% of the total population around the globe. Men smoke five times higher as compared to women, and average smoking rate for male was 36% whereas it was only 7% for the females. Likewise, men in Western Pacific region has higher rate of tobacco usage (48%) where as highest smoking prevalence among femalesis noted in European region which is 19%. Smoking prevalence among the adolescent girls (aged between 13-15 years) covers 8% of all the smokers globally, however this average doesn't cover the smoking adolescent girls in European and African region due to unattainability of data for comparison. In WHO regions of Americas, this average has been seen on its peak, where 14% of adolescent girls are smokers. From this it can be assessed that smoking rates among adolescent girls are higher in those countries where there are minimal laws against

tobacco. On the other hand, smoking rates among boys (aged between 13-15 years) in Eastern Mediterranean region and South-East Asia region are higher as compared to the rest of the world, and their rate of smoking has been recorded at more than 20% (WHO 2016). Harris (1999) opined that present knowledge states that the habit of tobacco smoking is usually taken up during adolescence and early adulthood. Additionally, some researchers suggested a link of various psychological pathologies with smoking. Peer pressure and an image of high status lifestyle models also encourage smoking. Since teenagers and early adults (university students) are more influenced by peers and life style models, they are more prone towards smoking (Stanton & Silva 1992; Paton et al., 1992; Harris 1999). It shows that 48% agreed on the negative effects of showing among male followed by 29.3% among female, those who undecided 8.8% male and 4.4% females while those who disagree are 6.2% for male and 2.5% for female. There is a statistical significant chi-square 133.66035 which is greater and the critical value 37.65.

The influence of marital status on the knowledge of effects of smoking among adult in sokoto. Among married 62(23%), 11(41%) and 4(1.5%). Agree undecided and disagree on smoking causing lung malignancy while among the single 169(62%), 3(1.1%) and 21(8.2%) agree undecided and disagree respectively. Smoking cause pulmonary COPD among married 62(23%)and 10(37%) and 5 (1 .9%) agree, undecided and disagreed ,while among female 169 (62%) agree, 3(1,1%) and 23(5.5%) undecided and disagree respectively smoking cause malignancy of breast and urinary bladder among married 62(23%/8 (3.0%) and 7(2.6%) agree undecided and disagree respectively while in single 169(63%), 11(4,1%) and 13(4.8%) agree, undecided, disagree respectively. Among single subject 169(63%), 11(4.1%) and 13(4.8%). Smoking cause hypertension married 162(23%) ,1(0.3), 14(5.2%) agree undecided and disagree respectively. Smoking short stroke and brain damage among married 70(26%) 3(1.1%) and 4(1.5%) agree undecided and disagree, while among single 140 (52%), 20(7.4%) and 33 (12.2%) agree undecided and disagree respectively on the subject matter Knowledge of smoking causes genetic disease in children among married 62(23), 4(1.5%) and 11(4.4%) agree undecided disagree respectively while in singles 139(51%), 20(7.4%) and 35(1.3%) agree, undecided and disagree respectively. The level of knowledge by respondent was 23.7% agreed, 2.5% undecided, 2.8% disagree among married while among single 59%, 2.4% and 9.1% agree, undecided and disagree respectively. They were statistically significant influence of marital status on the knowledge of the negative effect of cigarette smoking. The chi-square 84.859 is greater than the critical value 37.65 at df =25.

The influence of year in higher institution showed that smoking causing lung malignancy 138(51%), 12(4.4%), 12(4.4%) agreed, undecided and disagree for first year students while among second year 14(16.3%), 3(1.1%), 1(0.3%) agreed, undecided and disagreed respectively. Those in third year shows 40(15%), 0(0% and 0(0%) agreed, undecided and disagree respectively. Fourth year students 14(5.2%), 1(0.3%) and 5(1.9%) agreed, undecided and disagree respectively. Smoke causing Pulmonary (COPD) 139(51%) 14(4.1%) 12(4.4) agreed, undecided and disagree respectively for first year students, second year students 44(16%), 2(0.7%) and 7(2.6%) agreed, undecided and disagree respectively and fourth year students showed that 19(7.0%), 1(0.3%) and 0(0%) agreed, undecided and disagree respectively. Smoke causing malignancy of the breast and bladder 140(52%), 10(3.4%) and 12(4.4%) agreed, undecided and disagree respectively for first year students while in second year students 41(5.2%), 7(2.6%) and 1(0.3%) agreed, undecided and disagree respectively, for third year 31(11.5%), 2(0.7%) and 7(2.6%) agreed, undecided and disagree respectively. Students in fourth year 13(5.6%), 5(1.9%) and 0(0%) agreed, undecided and

disagree respectively that smoke causing malignancy of breast and bladder knowledge of smoking causes hypertension vary across the year. The first year 146(54%), 10(3.7%) and 11(4.1%) agreed, undecided and disagree respectively, the second year students 45(16%), 0(0%) and 5(1.9%) agree, undecided and disagree respectively, the third year students showed that 30(11.1%), 0(0%) and 10(3.7%) agreed, undecided and disagree respectively while those of fourth year 19(7%), 1(0.3%) and 0(0%) agreed, undecided and disagree respectively. Smoke causing stroke and brain damage showed that in first year students 150(56%), 6(2.2%) and 6(2.2%) agreed, undecided and disagree respectively. Among second year 41(15.2%), 0(0%) and 7(2.6%) agree, undecided and disagree respectively. Third year student showed that 25(9.3%),11(4.1%),4(1.5%) agree and disagree while fourth year student 20(7.4%), 0(0%) and 0(0%) agree, undecided and disagree respectively on smoking causing stroke and brain damage. Smoking causing genetic disease in children 160(59%), 2(0.7%) and 0(0%) agree, undecided and disagree respectively, while those in second year 42(15.6%), 5(1.9%) and 1(0.3%) agree, undecided and disagree respectively. Among third year student 25(9.5%), 10(3.7%) and 5(1.9%) agree, undecided and disagree respectively while fourth year student 20(7.4%), 0(0%) and 0(0%) respectively that smoking causes genetic disease in children. The degree of knowledge measured in percentage showed that in first year student, second year student 15.7, 1.0 and 1.0 agree, undecided and disagree respectively. Among third year student 11.2, 1.6 and 2.0 agree, undecided and disagree respectively, while fourth year student 6.7, 0.5 and 0.3 agree, undecided and disagree respectively on the knowledge of the negative effect of cigarette. There is a statistical significance difference or relationship between the year in higher institution and the knowledge of negative effect of cigarette smoking, chi-square 136.2404 which is greater and the critical value 73.311 rejecting the null hypothesis. Smokers' low perception of the negative effects of their smoking behavior on their health also results in many of them being unwilling to quit smoking (Fawibe & Shittu, 2011). A possible explanation for this attitude could be that most tobacco users are not fully aware of the harms caused by tobacco use (WHO, 2011) hence their underestimation of the ill-effects of smoking.

5. Conclusion

The knowledge about the health hazards of smoking has not always served to prevent people from smoking (Hussain et al., 2009). Smokers' low perception of the negative effects of their smoking behavior on their health also results in many of them being unwilling to quit smoking (Fawibe & Shittu, 2011).Cigarette smoking has also been implicated either as a contributory factor or causal agent in the following health conditions: osteoporosis, blindness, impotence, loss of teeth, diabetes, reduced fertility, cataracts, asthma, reduced sperm count, fungal eye infection, early menopause, stomach ulcers, cardiovascular heart diseases, reduced lung function, reduced lung growth, and atherosclerosis (Fakoya, 2010 ; U.S. Department of Health and Human Services, 2012). The research concluded that the knowledge of negative effect of cigarette smoking among adults in sokoto metropolis was very good across the different variable (marital status, gender, and year in higher institution) with single, male and first year in higher institution showing significant knowledge of the negative effect of cigarette smoking.

References

Atawodi, S., Preussmann, R., & Spiegelhalder, B. (1995). Tobacco-specific nitrosamines in some Nigerian cigarettes. *Cancer Letters, 97*(1), 1-6.

Desalu, O., Olokoba, A., Danburam, A., Salawu, F., & Issa, B. (2008). Epidemiology of tobacco smoking among adults population in North-East Nigeria. *The Internet Journal of Epidemiology*, *6*(1).

Fakoya., O. (2010). *Nigeria: The Health, Economic and Social Menace of Smoking - Time for Concerted Actions*. Retrieved from http://www.nigeriavillagesquare.com/articles/guest-articles/.

U.S. Department of Health and Human Services. (2012). *Preventing tobacco use among youth and young adults: a report of thesurgeon general.*

Hammond, E. C., & Horn, D. (1988). Smoking and death rates—report onforty-four months of follow-up of 187,783 men. *CA: A CancerJournal for Clinicians, 38*, 28-58.

Eriksen, M. P., Maistre, C. A. L., & Newell, G. R. (1988). Health hazards ofpassive smoking. *Annual Review of Public Health, 9*, 47-70.

Humble, C., Croft, J., Gerber, A., Casper, M., Hames, C. G., & Tyroler, H. A. (1990). Passive smoking and 20-year cardiovascular diseasemortality among non-smoking wives, evans county, Georgia. *American Journal of Public Health*, *80*, 599-601.

Almeida, O. P., Garrido, G. J., Alfonso, H., Hulse, G., Lautenschlager, N. T., & Hankey, G. J (2011). 24-Month effect of smokingcessation on cognitive function and brain structure in later life. *Neuroimage, 55*(4), 1480-1489.

Hussain, N., Akande, T., & Adebayo, O. (2009). Prevalence of cigarette smoking and the knowledge of its health implications among Nigeriansoldiers. *East African Journal of Public Health, 6*(2), 168-170.

Fawibe, A., & Shittu, A. (2011). Prevalence and characteristics of cigarette smokers among undergraduates of the University of Ilorin, Nigeria. *Nigerian Journal of Clinical Practice*, *14*(2), 201-205.

W. H. O. (2011). *WHO Report on the Global Tobacco Epidemic,2011: Warning About the Dangers of Tobacco*, 2011.

Smith, D. R., & Leggat, P. A. (2007). An international review of tobacco smoking in the medical profession: 1974-2004. *Bio medical central*, *7*, 1471-2458

Staton, R. W., & Silva, P. A. (1992). A longitudinal study of the influence of parents and friends on children's initial of smoking. *Journal of applied developmental psychology*, *13*(4), 423-434

Ygoy Health community. (n.d.). *Smoking*. Retrieved from http://smoking.ygoy.com/what-is-smoking/

West, R., & Schiffman, S. (2007). *Fast facts: Smoking cessation* (2nd ed.). Abingdon-on-Thames, England: Health Press Ltd.

World Health Organization. (2012). *Tobacco.* (No.339). Retrieved from http://www.who.int/mediacentre/factsheets/fs339/en/

Paton, G. C., Hibbert, M., Rosier, M. J., Carlin, J. B., Caust, J., & Bowes, G. (1992). Is smoking associated with depression and anxiety in teenagers? *American journal of public health*, *869*(2), 225-230

Harris, J. R. (1999). *The Nurture Assumption: Why children turn out the way they do* (pp. 146-217). New York, NY: Simon & Schuster.

World Health Organization. (2016). *Global Health Observatory (GHO) Data: Prevalence of Tobacco Use.*