

Prevalence, Perception and Enabling Factors Associated With Cigarette Smoking among Senior Secondary School Students in Festac Town, Amuwo-Odofin Local Government Area, Lagos State

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Abstract: Tobacco consumption through cigarette smoking is one of the world's leading preventable causes of non-communicable diseases and premature death accounting for six million preventable deaths each year. Adolescent experimentation with a highly addictive drug like nicotine, easily leads to a lifetime of tobacco dependence. Early age of smoking initiation among young people may predispose them to long-term negative effects. This assess the Prevalence and Factors Associated with Cigarette Smoking among Senior Secondary Students in FESTAC Town, Amuwo-Odofin Local Government Area, Lagos State. A cross-sectional study was conducted among senior secondary school students enrolled in public schools within FESTAC Town. A population of 368 students were sample was selected through a multistage sampling technique. A validated questionnaire with Cronbach's alpha reliability coefficients, which ranged from 0.7 to 0.85, was used to gather data. The instrument assessed knowledge, attitudinal dispositions and perception of students to cigarette smoking. Data was analyzed using IBM SPSS version 23. The study highlighted that the prevalence of cigarette smoking among the respondents is 6.8%, although about 39.4% of the respondents have tried or experimented with cigarette smoking. In regards to attitudinal disposition towards cigarette smoking, many 68.8% of the respondents showed positive attitudinal disposition towards cigarette smoking. Many 3.6% showed positive perception about cigarette smoking. Majority 87.3% showed high enabling factors of cigarette smoking. Majority 80.7% of the respondents indicated that they have never thought of smoking, Nearly all 92.9% of the respondents indicated that they do not think about taking part in smoking, few 3.0% who indulge in smoking indicated they have plans to stop smoking and only 6.5% of the respondents indicated that they have stopped smoking. The study concluded that the prevalence of smoking among was high which was also similar to other studies that have been conducted both locally and globally. This suggests that there is a need for the education sector to create early cost-effective interventions and education campaigns that target pre-secondary and secondary school students. These interventions should extend to their place of residence so that influences in the home environment and social surroundings that contribute to cigarette smoking are also tackled.

Key word: Prevalence, Cigarette, Smoking, Senior Secondary School Students.

I. INTRODUCTION/ BACKGROUND

Tobacco is the only legally available consumer product (Momoh, 2009). World Health Organization [WHO] (2015) has opined that smoking is a top cause of death. Tobacco use is a major cause of many of the world's top killer diseases, including cardiovascular disease, chronic obstructive lung disease and lung cancer. In total, tobacco use is responsible for the death of about 1 in 10 adults worldwide when entirely used as expected (Oyerinde, Oyeride, Awoniyi, 2016). Tobacco consumption through cigarette smoking is one of the world's leading preventable causes of non-communicable diseases and premature death accounting for six million preventable deaths each year. It is also a risk factor for six of the eight leading causes of death namely, chronic obstructive pulmonary disease (COPD), ischaemic heart disease, trachea, bronchus and lung cancers, cerebrovascular disease, lower respiratory tract infection and tuberculosis. (Oyewole, Animashaun & Chapman, 2018).

Cigarette smoking became the predominant form of tobacco used across the world during the 20th century and ushered in the global lung cancer epidemic (Gana, Idris, Sabitu, Oche, Abubakar, & Nguku, 2018). The World Health Organization predicted that the collective number of tobacco related deaths should increase to one billion in the 21st century (up from 100 million in the 20th century) unless global tobacco control measures are implemented rapidly because smoking threatens the lives of at least one billion people as it kills a third to half of its users. (Hoffman, Mammone, Rogers Van Katwyk, Sritharan, Maxwell, 2019). Recent data suggests that there are approximately 1.3 billion smokers worldwide and about 80% of these smokers live in low- and middle-income countries (LMICs) like Nigeria, where the burden of tobacco-related illness and death is heaviest and more than two-thirds of smoking related deaths occur. Due to steady population growth, tobacco use is growing fastest in low-income countries and the tobacco industry targets these vulnerable populations. Studies suggest that children are the most vulnerable and the habit starts in youth. (Adeloye, Auta, Fawibe, Gadanya, Ezeigwe, Mpazanje, Dewan, Omoyele,

Alemu, Harhay&Adewole, 2019; World Health Organization [WHO], 2008 & 2020; Momoh, 2009).

Momoh(2009) reported that cigarettes contain nicotine, a highly addictive substance, as addictive as cocaine or heroin, thus, about 80,000 to 100,000 young people around the world become addicted to tobacco each day. They look at addicted youths as the only hope for the future of the industry. Although anyone who uses tobacco can become addicted to nicotine, people who do not start smoking before age 21 are unlikely to begin smoking. Furthermore, adolescent experimentation with a highly addictive drug like nicotine, easily leads to a lifetime of tobacco dependence. Therefore, 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.

Nigeria, one of the most populous countries in Africa and it is one of the leading tobacco markets in Africa, with over 18 billion cigarettes sold annually costing Nigerians over US\$ 931 million. The World Health Organization estimated 13 million smokers in Nigeria in 2012, with over 16,000 deaths attributable to smoking. Unless urgent action is taken, the annual death toll could rise to more than eight million by 2030 (Adeloye et al, 2015). Today, more people smoke tobacco than at any other time in history and the health consequences of cigarette smoking are slow, gradual, and cumulative. Smoking leads to a variety of complications in the body system. The average decreased life span of smokers is approximately eight years. Smoking has been linked to chronic obstructive pulmonary disease (COPD), ischemic heart diseases, high burden of lung cancer, and stroke thereby accounting for more than 7 million deaths annually and this figure keeps increasing.

Globally, cigarette smoking among the youth is also a major public health concern because of the immediate and long-term health effects on the body therefore reducing adolescence-smoking rate is essential. The adolescence phase is a period of life characterized by psychological and physical changes. During this transitional phase, youngsters experience new things and adopt various forms of risk behaviors (Luecha, Peremans, Dilles&Rompaey, 2018). If the young smokers of today reach middle or old age, there will be approximately 10 million deaths from tobacco use annually, which means approximately 500 million individuals alive today can expect to be killed by tobacco use and 250 million of these deaths, will occur in the middle age group (35 – 69 years). Approximately one-half of people who start smoking in their teenage years and continue into adulthood will be killed by tobacco. One-half of these deaths will occur in their middle age (35 to 69 years of age) and each will lose an average of 20 - 25 years of a nonsmoker life expectancy. (Saha, Bhalla, Whayne, Gairola, 2007).

In Nigeria, about 16,100 tobacco-related deaths occur annually. It is likely that these numbers may be clearly underestimated because of weak surveillance systems.

Moreover, 5.6% (4.7 million) of Nigerian adults currently use a tobacco product and 3.9% (3.1 million) adults are current tobacco smokers. About 25,000 Nigerian children and adolescents (aged 10–14 years) smoke cigarettes each day. (World Health Organization [WHO], 2020). According to the CDC 2010, approximately 80% of current adult smokers began smoking before their 18th birthday. Most are aware of smoking's hazards, and few are worried about them. They are unaware of the addictive nature of smoking because they believe that they can quit smoking easily and at any time. Unfortunately, they are unable to quit when they want to and experience high relapse rates and debilitating withdrawal symptoms.

The adolescence phase is a unique developmental stage between childhood and adulthood. Many see smoking as a lifestyle habit acquired during adolescence and continue into adulthood. They assume that there are no adverse effects of smoking on the body but tobacco consumption has numerous effects on the brain, cardiovascular, immune, metabolic, gastrointestinal, and respiratory systems and causing different kinds of cancers, heart disease, and stroke. (Campaign for Tobacco-Free Kids, 2009). Approximately one-half of those who start smoking in their teenage years and continue until adulthood, may be killed by tobacco consumption. About one-half of these deaths will be in middle-aged individuals (35-69 years of age), thereby losing an average of 20-25 years of a non-smoker life expectancy. Understanding adolescents' perspectives of nicotine addiction is important since more than 90 percent of addicted smokers began smoking during adolescence, making tobacco use and addiction one of the greatest public health concerns worldwide.

FESTAC Town is inhabited with young people who are prone to the influence of urbanization and westernization; this exerts a significant impact on their knowledge, attitude and practice regarding risky behavior like smoking. A significant proportion of these adolescents are enrolled in the school system, this provides an opportunity to reach this vulnerable group as early as possible. Majority of these in-school adolescents are aged between 10 and 21 years; and studies suggest that smoking initiation rates are highest at this age. This proves that intervention at this time will be very useful in reducing initiation and addiction rates and may encourage current smokers to quit.

It is clear that smoking control measures have to be adopted to prevent the epidemic of tobacco-related diseases and deaths in developing countries. This will require data on smoking, especially among vulnerable groups like adolescents/students. In order to bridge this gap, this study is being conducted to determine the prevalence of smoking among adolescents and identify the enabling factors associated with this health depleting behavior. This study applied the Precede-Proceed model to cigarettes smoking to develop either a smoking cessation/prevention program. The Precede-Proceed model has been chosen for two major reasons. According to Aldiabat&Navenec, 2013, this model provides clear planning

steps for health promotion programs through the three levels of prevention (primary, secondary, and tertiary). Also, the precede-proceed model was built on numerous health and behavior theories such as health promotion model, health belief model, and the social learning theory

II. METHODOLOGY

The population of this study consists of one thousand, two hundred and thirty-six senior secondary school students in the selected government-owned schools of FESTAC Town, Lagos State. The population of the study are three (3) selected government-owned senior secondary schools. Leslie Fishers formula for sample size determination was added to calculated sample size of three hundred and twenty-two senior secondary school students who were then randomly selected. A quantitative method of data collection was used for this study. The instrument for data collection was a semi-structured questionnaire. The questionnaire was adapted from the Global Youth Tobacco Survey Questionnaire designed by World Health Organization and Centre for Disease Control.

III. RESULTS AND DISCUSSION

Three hundred and eighty questionnaires (380) were administered, and three hundred and sixty eight were correctly filled. The response rate was 95.2%.

Prevalence of Cigarette Smoking

The study highlighted that the prevalence of cigarette smoking among the respondents is 6.8%, although about 39.4% of the respondents have tried or experimented cigarette smoking.

Respondents' enabling factors on Cigarette Smoking

The respondents mostly (79.1%) indicated that none of their family members smoke cigarette, although 12.8% indicated that their father alone smoke cigarette. The respondents who highlighted that their family members smoke cigarette, a few (31.0%) indicated that their family members smoke in their presence. 54.6% of the respondents highlighted that none of their significant other do smoke cigarette. Similarly, more than half of the respondents also stated that none (60.6%) of their close friends' smoke cigarette although a few stated that some (24.7%) of their close friends do smoke cigarette. 59.8% of the respondents also stated that none of the students in their grade smoke cigarette although a few respondents indicated that some (21.2%) of the students in their grade smoke cigarette. 81.8% of the respondents reported that they have not been pressurized to smoke cigarette. For those who have been pressurized, a few (17.1%) indicated that their friends pressurized them and a few (11.1%) indicated that they did try smoking. From the few who tried smoking, some of the respondents (19.8%) indicated that they buy cigarette from other places aside the kiosk, public markets. Many (35.1%) of the respondents indicated that they usually do not have spending money, although 23.4% indicated that they spend 500 naira to 700 naira during an average week to spend on themselves however, they want. Other places (24.7%) aside

from the bedroom, friend's house and school building was itemised as where the respondents so stay to smoke. More than half (76.6%) of the respondents also indicated that their role model do not smoke. Consequently, more than half (73.6%) also indicated that they have been taught about the harmful effects of smoking tobacco, most (30.4%) of which were taught in the junior secondary school.

The respondents' enabling factors of cigarette smoking measured on an 11-point rating scale showed that the respondents scored a mean of 8.27 ± 2.46 translated to a prevalence of 75.1%. The proportion of the respondents with high enabling factors of cigarette smoking was 87.3%. One can infer that most of the respondents had high enabling factors of cigarette smoking.

Respondent's Perception about Cigarette Smoking

The study revealed that majority (70.1%) of the respondents strongly disagreed that smoking improves health. More than half (60.3%) of the respondents strongly disagreed that it is safe to smoke cigarettes occasionally. Put together, more than half of the respondents disagreed (29.3%) and strongly disagreed (32.3%) that young people who smoke cigarettes have more friends. Slightly above half (58.2%) of the respondents strongly disagreed that smoking cigarettes makes young people look more attractive. Similarly, slightly above half (53.0%) of the respondents also strongly disagreed that smoking cigarettes is pleasurable. Consequently, put together, more than half disagreed (27.4%) and strongly disagreed (40.2%) that smoking cigarettes relieves tension. The respondents' perception about cigarette smoking measured on a 15-point rating scale showed that the respondents scored a mean of 13.37 ± 3.40 translated to a perception prevalence of 74.3%. The proportion of the respondents with positive perception about cigarette smoking was 63.6%. One can infer that most of the respondents had a positive perception about cigarette smoking.

Test of hypotheses

Two hypotheses were tested for this study. In testing these hypotheses, Pearson correlation and linear regression were conducted at 0.05 level of significance. The decision rule applied was that if the p-value computed was less or equal to the cut-off p-value of 0.05, the null hypothesis will be rejected in favor of the alternative hypothesis and vice-versa.

Hypothesis 1: There is no statistically significant relationship between the prevalence and perception about cigarette smoking. The result of the correlation showed a significant relationship between the prevalence and perception about cigarette smoking ($p=0.024$). In addition, the multiple regression analysis showed that respondents perception had a significant association with prevalence ($R=0.133$; $R^2=0.018$; $p=0.024$). Therefore, based on these values, the prevalence is dependent on the attitude about cigarette smoking. Hence, the null hypothesis is rejected.

Hypothesis 2: There is no statistically significant relationship between the prevalence and enabling factors of cigarette smoking. The result of the correlation showed no significant relationship between the prevalence and enabling factors of cigarette smoking ($p=0.052$). Therefore, based on these values, the prevalence is not dependent on the enabling factors about cigarette smoking. Hence, the null hypothesis is rejected.

Table 1: Summary of Descriptive Statistics of Mean, standard Deviation and prevalence in the Study

Variables	Maximum Point on a Scale of Measure	Respondents in this study N=241		Prevalence (%)
		\bar{x}	$\pm SD$	
Perception	18	13.37	3.40	74.3
Enabling factors	11	8.27	2.46	75.1

Cigarette smoking remains a major preventable public health problem associated with premature deaths worldwide. Adolescence is a unique developmental stage between childhood and adulthood. Smoking is a lifestyle habit acquired during adolescence and into adulthood, with its associated morbidity and mortality (WHO, 2014). While it has been established that many smokers start before the age of 18 years (Fawibe, & Shittu, 2011), of serious concern, is the increasing trend in smoking prevalence among adolescents and the likelihood that many of these young people who begin to smoke at an early age, will continue to do so throughout adulthood (Abikoye, & Fusigboye, 2011). Each day, about 4400 adolescents try their first cigarette and contribute to the 1.5 million adolescents who begin to smoke each year, of the adolescents who begin smoking at an early age, about 50% of them will die from diseases associated with smoking (Okagua, et al, 2014). A marginal yearly increase of 3% in cigarette smoking prevalence has been reported for developing countries (Owonaro, & Eniojukan, 2015). Young persons are being introduced to cigarette smoking at an earlier age and because of its addictive nature become hooked on it. It is therefore important to determine the factors associated with cigarette smoking in these adolescents in order to institute preventive measures and health policies to protect these adolescents early.

IV. DISCUSSION OF FINDINGS

Results from the study indicated that more than half of the respondents were between the ages of 10-16 years which is similar to the findings of Itanyi, et al, 2020; Raji, et al., 2017; Andrade, et al, 2017; Okagua, et al, 2016; Reda, et al, 2012. These similarities may be because the subject matter is concern with adolescents and because the above-mentioned age is the expected age for students in secondary schools. Most of the respondents' reported that smoking does not improve health; Osuh, et al (2020), Xu, et al (2016); Albangy, et al (2019), Gana et al (2018) also reported similar result. These similarities may occur due to the exposure to different form of

mass media among the respondents (Yoo, et al, 2016). Furthermore, half of the respondents stated that smoking cigarettes does not make young people look more attractive and that refuted that cigarette smoking is pleasurable and does not relieve tension. In contrast to the finding, Xu, et al (2016) found that students adopted the attitude that smoking is pleasurable, and they believe that smoking is not a waste of money, and smoking bring about relaxation. The findings indicate changing secondary school students' smoking related concepts and cognition are very important to tobacco control.

Although a large amount of the respondents acknowledged that, their family members and friends do not smoke cigarette, a fraction of the respondents still indicated that their family members smoke cigarette ranging from father to their mother, siblings and friends. Findings from this study indicate that subjects whose parents smoked were more likely to be smokers than those whose parents were not smokers; which is consistent with previous studies (Raji, et al, 2017; Okagua, et al, 2016; Rachiotis, et al, 2008). This suggests the influence parents have on the lifestyle of their children. This is concurred by findings among school adolescents in Sri Lanka and East Timor-Leste that revealed that peer and parental factors that include having peers or parents who smoked were significantly associated with a higher chance of the child being a smoker (Katulanda, et al, 2015). A few of the respondent who have been pressurized to smoke indicated that their friends pressurized them into smoking; this is similar to reports by other researchers in Nigeria and around the globe (Yahya, et al 2010, Ebirim, et al 2014, Salawu et al 2011, Naing, et al 2004). Thus, these findings further emphasize the role of peer influence among adolescents and adolescent risky behaviors. Thus, adolescents should be encouraged to avoid friends who indulge in unhealthy lifestyle behaviors, as the friends could have a strong influence on the adolescents and the choices they make.

Tobacco use is the largest preventable cause of death globally, and is responsible for more than 8 million deaths per year (WHO, 2019). Most developed countries have recorded a decreasing prevalence of tobacco smoking; however, the prevalence has been increasing in low- and middle-income countries, particularly Sub-Saharan Africa, partly due to cigarette affordability and aggressive marketing by tobacco companies (Oyewole et al, 2018). In Nigeria, about 16100 tobacco-related deaths occur annually (WHO, 2019). It is likely that these numbers may be grossly underestimated because of weak surveillance systems. In addition, 5.6% (4.7 million) of Nigerian adults currently use a tobacco product and 3.9% (3.1 million) adults are current tobacco smokers (Itanyi, et al, 2020). Of greater concern is tobacco smoking by children and adolescents where 25000 Nigerian children (aged 10–14 years) smoke cigarettes each day (Oyewole et al, 2018).

Broadly, the study assessed the Prevalence and Factors Associated to Cigarette Smoking among Senior Secondary Students. Study participants were between the ages of 10-16

years and barely half of the respondents were female which is parallel to many studies. Prevalence of current smokers was high which was also similar to other studies that have been conducted both locally and globally. Enabling factors were high among the respondents. The enabling factors act like skills, resources, or barriers that can help or hinder the desired behavioural changes as well as environmental factors to help curb cigarette smoking.

V. CONCLUSION AND RECOMMENDATIONS

Two hypotheses were tested between the prevalence and the factors (perception towards smoking and the enabling factors of cigarette smoking) associated to cigarette smoking among the respondents. Respondents recorded a moderate perception with mean score of 13.37 ± 3.40 towards cigarette smoking; although relatively, a large percentage still have a negative perception. This therefore calls for intense education on the subject matter as education associates with perception and increases the chances of promoting positive perception. Respondents from the study reported a high enabling factor of cigarette smoking. Curbing the menace of cigarette smoking requires the need to strengthen the enabling factors because they are antecedents to behavior that enable a motivation to be realized. The results indicated that there is a significant relationship between prevalence and perception about cigarette smoking and the enabling factors of cigarette smoking. In conclusion, the study suggests that a combined effort be put in place to holistically increase the awareness of health hazards related to cigarette smoking among the respondents and the general population. The study also highlights the importance of changing secondary school students' image of cigarette smoking than merely educating them regarding the health hazards of smoking when they already possessed a good knowledge about those issues.

The following recommendations are therefore being suggested to chart a way forward:

This finding indicates that there is a need for early cost-effective interventions and education campaigns that target pre-secondary and secondary school students. Attention should not only be confined to secondary school but also extend to their place of residence so that influences in the home environment and social surroundings that contribute to cigarette smoking are also tackled.

Furthermore, the presence of smoking ban policy is not enough to eradicate smoking. Hence, the level of students' compliance with the smoking policy in the schools should be monitored to achieve complete tobacco control.

This research also recommends that there should be educational efforts for family and teachers, in addition to students, in order to curb the use of these products, given that the students perceived that acceptance of use was relatively high among this population

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