



# Current Prevalence Rate of Cigarette Smoking among Adult Patients at a Tertiary Hospital in South East Nigeria

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## **Authors' contributions**

*This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.*

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## **ABSTRACT**

**Purpose:** The objective of this study is to ascertain the current prevalence of smoking among the adult patients presenting at the outpatient department of Federal University Teaching Hospital, Owerri, Imo state.

**Methodology:** A cross-sectional study was conducted on consecutive patients aged 18 years and above from February to March 2023. Patients data were collected using interview administered questionnaire.

**Results:** Six hundred and forty-three patients (427 males vs 216 females) were enrolled in the study. The prevalence rate of smoking in the study population is 10.3%, with majority of male smokers 87.9% compared to female smokers 12.1%. Self-employed patients and students accounted for majority of the smokers while there was no pensioner or housewife that smoked.

**Conclusion:** The prevalence of smoking in the study population is still very high, hence, the need for more active measures to enforce smoking cessation.

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**Keywords:** Cigarette smoking; adults; occupation; gender; marital status; tertiary hospital; Nigeria.

## 1. INTRODUCTION

Tobacco smoking is adjudged to be one of the commonest risk factors of chronic medical conditions like diabetes mellitus, chronic obstructive airway disease and cardiovascular diseases including cancers in the world [1]. It is responsible for more than 7 million deaths worldwide with secondhand smoking accounting for 10% of the deaths [2]. Among the 1.2 billion smokers worldwide, 80% live in low and medium income countries where there are suboptimal medical resources to take care of tobacco related illnesses [3].

With the unrestricted and non-regulated use of tobacco products, tobacco could kill over 1 billion people in the 21st century [4,5]. It is estimated that 100 million premature deaths occurred globally in the 20th century, due to tobacco smoking. Equally, tobacco smokers are believed to lose one decade of their life expectancy, when compared to people who have never smoked [6].

Though global current smoking rates among adults decreased from 23.5% to 20.7% between 2007 and 2015<sup>4</sup>, this reduction was largely due to the declining smoking rates in Northern and Western Europe, North America and the Western Pacific regions<sup>3,7</sup>, where considerable measures have been implemented to tackle tobacco smoking. However, smoking rate appears to be increasing in the Middle East and Africa. In sub-Saharan Africa, the consumption of tobacco increased by 57% between 1990 and 2009 [7].

Nigeria is one of the largest country in Africa with a big tobacco market and domesticated the convention agreement in 2005. Nigeria equally legalized the National Tobacco Control (NTC) Act in 2015 which seeks to regulate all aspects of tobacco control including advertising, packaging and smoke-free areas<sup>2</sup>. In spite of all these, the rate of smoking is still increasing by 4% annually by some reports [8].

In the latest systematic research and meta-analysis done by Adeloye *et al* in 2019 across 64 studies (n = 54,755), the prevalence of current smokers ranged from 1.2% recorded in Yaba Lagos, South-west Nigeria in 2015<sup>9</sup>, to 55.5% in Amassoma Delta State, South-south Nigeria. Also in 2015, the pooled crude prevalence of current smokers in Nigeria was

10.4% (95% CI: 9.0– 11.7). The pooled crude prevalence of current smokers in Nigeria was 10.4% (9.0-11.7) and 17.7% (15.2-20.2) for ever smokers. This is higher among men compared to women in both groups. There was considerable variation across geopolitical zones, ranging from 5.4% (North-west) to 32.1% (North-east) for current smokers, and 10.5% (South-east) to 43.6% (North-east) for ever smokers. Urban and rural dwellers had relatively similar rates of current smokers (10.7 and 9.1%), and ever smokers (18.1 and 17.0%) [9].

It will be necessary to ascertain the current prevalence of smoking to get the current trend considering the efforts by the Government to curtail the rate of smoking in our environment. Most of the reported studies in our South East region of Nigeria were either among university students or adolescents. There have been no recent studies on the prevalence of smoking among adult patients in our locality and this study will enable us appreciate the current picture of cigarette smoking among the adult population to enable us access the effectiveness of the interventions thus far to reduce the rate of cigarette smoking in Nigeria.

## 2. METHODOLOGY

In February 2023 we carried out a cross-sectional study among 643 consecutive newly registered adults that presented to our general outpatients at Federal University Teaching Hospital, Owerri, Imo State. We excluded patients with physical and neurocognitive disorders and those that are more than 80 years of age.

Well trained assistants administered the questionnaire to the respondents which among other questions requested them to confirm if they are currently smoking cigarette, in addition to their gender, marital status, age and occupation.. Informed consent was obtained from the respondents.

The hospital ethics committee approved the study.

### 2.1 Statistical Analysis

All the data was analyzed using SPSS version 9 results are represented in frequencies and percentages.

### 3 RESULTS

Our sample size is 643. There are 387 (60.2%) females and 256(39.8%) males in the study group. The male –to- female ratio is 1:1.5

A total of 643 respondents were studied, only 66 are smokers giving us an overall prevalence rate of 10.3% Table 1. Among the smokers, 87.9% are males while 12.1% are females Table 2.

**Table 1. Rate of smoking among the study population**

Smoking	Frequency	Percentage
No	577	89.7
Yes	66	10.3
Total	643	100

**Table 2. Sex distribution of smoking habit amongst the sampled population**

Gender	Not smoking(%)	Smoking (%)	Total(%)
Male	379(65.7)	8(12.1)	387(60.2)
Female	198(34.3)	58(87.9)	256(39.8)
Total	577(100)	66(100)	643(100)

In the occupational distribution of the population Table 3, businessmen accounted for the majority of the respondents (28%), closely followed by students (24.3%) and self employed people (18.7%) while the least are housewives (5.7%).

Self employed people have the highest rate of smoking (45.5%) followed by students(27.3%) while none of the housewives and pensioners smoked.

Among the 643 respondents,427 (66.4%) are married while 216 (33.6%) are single. Among the smokers, married respondents is 48(72.7%) are married while 18(27.3%) are single Table 4.

**Table 3.Occupational distribution of the population and cigarette smoking prevalence**

Occupation	Number not smoking (%)	Number smoking (%)	Total (%)
Business	168(29.1)	12 (18.2)	180(28.0)
Civil servant	96(16.6)	6(9.1)	102(15.9)
House wife	36(6.2)	0	36(5.6)
Pensioner	49(8.5)	0	49(7.6)
Self-employed	90(15.6)	30(45.5)	120(18.7)
Student	138(23.9)	18(27.3)	156(24.3)
Total	577	66	643

### 4 DISCUSSION

This article examined the prevalence rate of smoking and some related factors among the patients attending the outpatient at our hospital.

The prevalence of cigarette smoking is 10.3%, this is almost the same, 10.5% reported for South East region of Nigeria in a pooled prevalence by Adeloje et al in 2019 [9]. A study in Vietnam among outpatient attendees reported a prevalence rate of 18.6% [10]. A closer study amongst our undergraduates in Imo state reported a prevalence rate of 27% [11]. Our reported prevalence rate (10.3%) is surprisingly higher than the prevalence rate of 9.2% reported in a population based study in the commercial city of Lagos, Nigeria [12].

In our study, the prevalence of smoking is higher among males (87.9%) compared to females (12.1%). This is very consistent with almost all previous reports [9,10,13]. This may be due to sociocultural reasons.

In this study, businessmen and students recorded the highest rate of smoking while pensioners and housewives recorded the least. Most students are adolescents and a study done in our state reported a relatively high prevalence of 27% among our undergraduates. An amazing high rate of 29.6% was however reported in a community based study in Imo state [14]. Most of other studies reported a relatively higher prevalence of smoking among the youths. Adolescents usually start smoking not out of physiological need but out of a desire for social self-growth, to be treated as an adult in society, or out of resistance to established regulations [15]. With the current westernization, liberal society and societal peer pressure, many students are likely to have a higher tendency to engage in smoking. Interestingly, none of the housewives and pensioners smoke cigarette

possibly because the housewives are dependent on their husbands fully while most of our pensioners are really not getting their regular pensions anymore, hence, socioeconomic reasons may account for the findings.

There are more married smokers than single smokers.

**Table 4. Marital status and smoking**

Marital Status	Not Smoking(%)	Smoking(%)	Total
Married	379(65.7)	48(72.7)	427(66.4)
Single	198(34.3)	18(27.3)	216(33.6)
Total	577	66	643

## 5. STUDY LIMITATIONS

First, our participants were selected from a single outpatient clinic in our hospital at Owerri, Imo State.

Secondly, the patients were selected on a convenience basis. This could result in selection bias.

Thirdly, we used a non probability technique, and therefore cannot be generalized beyond the study population.

Finally, a cross-sectional study design was used to analyze the association between smoking and its associated factors.

This study, however, provided useful data concerning smoking and its associated factors among adult patients attending an outpatient clinic in south east, Nigeria.

## 5. CONCLUSION

The prevalence of smoking among the population is very high. While the prevalence of smokers may seem to be declining in Nigeria, one out of ten Nigerians still smokes daily. There is need for comprehensive measures and strict anti-tobacco laws targeting tobacco production and marketing. Our study highlights the need for more active measures to enforce smoking cessation

## CONSENT

As per international standards or university standards, patient(s) written consent has been collected and preserved by the author(s).

## ETHICAL APPROVAL

As per international standards or university standards written ethical approval has been collected and preserved by the author(s).

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

## REFERENCES

1. World Health Organization. Global health risks: Mortality and burden of disease attributable to selected major risks. Bull World Health Organ. 2009;87:646
2. World Health Organization. WHO Report on the global tobacco epidemic, Enforcing Bans on Tobacco Advertising, Promotion and Sponsorship. Geneva, Switzerland: World Health Organization. 2013:106.
3. Saleheen D, Zhao W, Rasheed A. Epidemiology and public health policy of tobacco use and cardiovascular disorders in low- and middle-income countries. Arterioscler Thromb Vasc Biol. 2014;34: 1811-95.
4. Eriksen M, Nyman A, Whitney C. Global tobacco use and cancer: findings and solutions from the tobacco atlas; 2014. Available:[http://cancercontrol.info/wp-content/uploads/2014/08/43-48-Eriksen\\_cc2014.pdf](http://cancercontrol.info/wp-content/uploads/2014/08/43-48-Eriksen_cc2014.pdf)
5. Sreeramareddy CT, Pradhan PM, Sin S. Prevalence, distribution, and social determinants of tobacco use in 30 sub-Saharan African countries. BMC Med. 2014;12(1):243.
6. World Health Organization. WHO global report on trends in tobacco smoking. Geneva: World Health Organization. 2015:2000–2025.
7. Scollo M, Winstanley M. Tobacco in Australia: Facts and issues. Melbourne: Cancer Council Victoria. 2018
8. Ake A. Nigeria: Tobacco consumption contributes 12% deaths from heart diseases - NHF. THISDAY; 2018.
9. Adeloye D, Auta A, Fawipe A, Gadanya M, Ezeigwe N, Mpazanga R et al. Current prevalence pattern of tobacco smoking in Nigeria: A systematic review and meta-analysis. BMC Pub Health (2019);19(1): 1719.

10. Huang WC, Pham NY, Nguyen TA. et al. Smoking behaviour among adult patients presenting to health facilities in four provinces of Vietnam. BMC Public Health. 2021;21:845.
11. CAJ Emerole, HN Chineke, KC Diwe, DPM Onubeze .The Prevalence of Smoking among Undergraduates of Imo State University Owerri, SouthEastern Nigeria NJMP11.2. 2013;43-47
12. Omolara UtiOyinkansola SofolaWasiu Adeyemo Oladunni Ogundana. Pattern of smoking and nicotine dependence in Lagos State Nigeria. 17th World Conference on Tobacco or Health, WCTOH 1/. 2018;16.
13. Mony P, D'Souza G, Sreedaran P, Rekha D, Srinivasan K. Clinicoepidemiological profile of tobacco users attending a tobacco cessation clinic in a teaching hospital in Bangalore city. Lung India. 2012;29:137-42.
14. Adetomi Bademosi, Vivian Chijioke. Prevalence and pattern of smoking among young adltsia a rural communityin Imo state. International Journal of Novel Research in Healthcare and Nursing. 2021;8(3):130-135.
15. Park HK. The social-politic consideration about youngmen's drinking and smoking. J Korean Med Assoc. 1967;10: 545–548.

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