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The Impact of Tobacco Smoking on Health and Cessation among a Cohort of Smokers in Ibadan

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Abstract This study was designed to assess the impact of tobacco smoking on health and cessation among a cohort of smokers in Ibadan, Nigeria. The study adopted the descriptive survey design and the purposive sampling method was used to select seventy respondents from three Local Government Areas in Ibadan. Self validated questionnaire was used to collect data for the study. The results got revealed the most prominent health problems among the tobacco smoking motorcyclists. Therefore, there is need for mental health professionals to develop appropriate psychotherapeutic interventions to facilitate cessation among tobacco smokers.

Keywords Tobacco smoking, Health, Smoking cessation

1. Introduction

The cumulative effects of cigarette smoking are destructive and widespread. Reports have revealed an approximate composition of 4,000 chemicals in cigarettes which are found to be highly toxic. The cigarette constitutes a broad range of toxicants that impede the effective functioning of body organs in man and the overall immune system. Therefore, epidemiological studies primarily focused on tobacco smoking, and extensive studies have been carried out on consumption by human beings. It has been established that tobacco is the single cause of preventable deaths globally [2]. The consumption of tobacco directly or indirectly, contributes to the initiation of diseases which affects the heart and lungs.

Hence, smoking of cigarettes has become the major risk factor for cardiovascular diseases, chronic obstructive pulmonary disease (COPD) which includes emphysema, chronic bronchitis, and other cancers such as lung cancer, cancers of the larynx and mouth, and pancreatic cancer. It also causes peripheral vascular diseases and hypertension [2]. Indeed, a higher incidence of tobacco use is reported from Africa and Southern Asia. That is to say that a general decline has been observed among white men in the United States of America, United Kingdom and Northern Europe, while the rate of smoking among women is very high in Canada, U.S.A, Denmark and U.K, low in Japan and Spain except in year 2008 in which there was a little increase. The lowest smoking rates were recorded in Africa and India for women smokers but relatively high in China among women in Tiajin as recorded between1993-1997 [10].

Smoking is understood to be a highly complex behaviour, influenced by a number of factors each contributing to some degree of influence singly. It was found that genetic predisposition to tobacco use may, however, be modified by other individual and environmental factors, such as family structure, religion and marital status [5]. While another study found emerging evidence that genetic factors may influence an individual's choice of friends, and that some individual's genetic make-up may make them more susceptible to the influence of peer groups thereby influencing them to smoke [9].

Some studies revealed the prevalence of current tobacco smoking among adults in the USA to be an important measure of the health and economic burden of tobacco, stating that, a number of states are spending large sums of money on prevention and cessation programs. This in essence provides a baseline for evaluating the effectiveness of tobacco control programmes over time [22, 15]. Likewise, occasional tobacco smoking also constitutes a significant risk factor for tobacco-related diseases and is therefore included along with daily tobacco smoking.

Many studies on tobacco smoking revealed that tobacco smoking causes many different cancers: lung, oral cavity, nasal cavity and nasal sinuses, pharynx, larynx, oesophagus, stomach, pancreas, liver, urinary bladder, kidney, uterine cervix and myeloid leukaemia (11). In high resource countries, tobacco smoking accounts for approximately 30% of all human cancers. The same study above also reveals a global estimate translated into a proportion of cancer mortality attributable to smoking at 21%, representing 32%

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and 8% of adult cancer mortality in males and females respectively. Moreover, involuntary and secondhand smoke (SHS), also known as environmental tobacco smoke (ETS), which is smoke that comes from burning tobacco, is classified as a known human carcinogen which means a cancer causing agent [11, 16]. Tobacco smoke being a mixture of gases and particles, is found to contain more than 7,000 chemical compounds. These chemicals are known to be harmful, and 69 are known to cause cancer [10, 16, and 19]. The detrimental effects of tobacco use are further attributed to smoking in particular, which are seen in the causation of other notable chronic conditions: cardiovascular disease, peripheral vascular disorders, abdominal aortic aneurisms and obstructive pulmonary diseases [4].

More empirical findings [12] revealed that, about 1.3 billion people smoke globally making tobacco a major avoidable cause of disease and mortality worldwide. Using earlier estimates of the global prevalence of smoking, it is revealed that 1.1 billion people in 1995 estimated the proportion of daily smokers ≥ 15 years of age to be 29% of the world population in 1995 (including users of cigarettes and /or bidis in South Asia). The majority of these smokers are said to reside in less developed areas of the world, with wide variations in prevalence across regions in both males and females, but with overall prevalence being higher in males (47%) and females (11%) [8].

An estimated cancer mortality data suggest that if smoking patterns continue unaltered, a substantive increase to 19.3 million new cancer cases will be likely by 2025, due to growth and ageing of the global population. It is further stated that more than half of all cancers at (56.8%) and cancer deaths (64.9%) in 2012 occurred in the less developed regions of the world, and these proportions will increase further by 2025 [20, 12]. Supportively, it is also found that more than 60% of world's total new annual cases occur in Africa, Asia and Central and South America. These regions account for 70% of the world's cancer deaths [7]. Likewise, the same study found an estimated 14.1 million new cases of cancer, and global cancer-related deaths, accounting for 8.2 million deaths in 2012 as well [7, 20]. These data also highlight how large the population is that would benefit from interventions aimed at reducing tobacco use. Given the number of smokers worldwide, achieving tobacco abstinence is an urgent public health priority with no geographic limits.

In line with the above, health has been defined as a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity [13]. This definition of health implies that for a person to be regarded as healthy, he/she has to be free not only from physical infirmity but also free from any form of addictive behaviours such as smoking. Some researchers reveal that cessation from smoking has immediate as well as long-term health benefits for men and women of all ages, reducing risks of diseases caused by smoking and improving health in general [3]. In addition, studies have found that, many participants from an experimental study of 50-year follow up quit as the evidence on smoking and health accumulated from the 1950s onwards [6, 1]. This provided a natural experiment demonstrating the impact smoking had on health and eventual mortality. The study showed just how hazardous smoking is and estimated that almost two-thirds of persistent smokers were killed as a result of smoking. Among those who quit, the greatest benefit was seen in those who quit early in life. Quitting at age 50 halved the risk of smoking-related death, but cessation by age 30 avoided almost all of the excess risk. Stopping at age 60, 50, 40 or 30 resulted in gains of about three, six, nine, or ten years of life expectancy respectively [1, 21].

This study therefore intends to investigate associative health problems among some commercial motorcyclists in Ibadan, Nigeria and the factors contributing to their willingness to cease or continue smoking. The rationale for choosing this population arises from the fact that, commercial motorcyclists popularly called "Okada" riders are used in Nigeria to bridge the transportation gap in most cities across the country. These motorcycles are used for hire in Nigeria, and have different names in different parts of the country [18]. However, they pose a lot of dangers to themselves, passengers and other road users. It is claimed that some of these 'okada' riders operate under the influence of cigarettes, illicit drugs and other psychoactive substances [18]. To corroborate this statement, a study found that tobacco use is the most crucial risk factor for cancer causing over 20% of global cancer deaths and about 70% of the global lung cancer deaths [7].

1.1. Objectives

The objectives of this study include the following:

1. To determine the sources of influence contributing to smoking.
2. To examine some factors responsible for smoking cessation.
3. To explore some demographic factors in relation to smoking and health.

2. Methods

This study is a cross sectional study which adopted the descriptive survey design. The purposive sampling technique was used in selecting 70 participants from three local government areas in Ibadan for the study. Three LGAs were randomly selected out of the eleven LGAs in Ibadan metropolis: Akinyele, Ibadan North and Ibadan North West. Also, random sampling was used to select the motorcycle parks to be used for the study and eventually, a total of ten parks were used. Out of the 70 questionnaires administered, 61 were returned. This number was got as a result of the unique nature of the participants that were used. Not all the motorcyclists who smoke were willing to take part in the study, hence the use of the purposive method. The remaining nine questionnaires were discarded as a result of incomplete responses.

2.1. Instrument

Data required for this study were collected using a self-constructed questionnaire titled: Tobacco Addiction Questionnaire (TAQ). The questionnaire consisted of two parts. The first part elicited demographic information, while the second part consisted of items which were designed to reveal smoking behaviour and medical history. Items used include: How long have you been smoking? Respondents were asked to either specify or tick an appropriate option of yes or no. The instrument was validated using a test-retest method and had a reliability coefficient of 0.73.

2.2. Data Collection

The researcher administered the questionnaires personally to the respondents. This was done at the various motorcycle parks were the commercial motorcyclists pick up passengers from. The researcher went to three randomly selected local government areas in Ibadan metropolis.

2.3. Data Analysis

The researcher made use of the descriptive statistics such as frequencies and percentages to summarize the characteristics of the respondents. To determine the distribution of ailments and frequency of occurrence resulting from tobacco smoking, the mean was used. To ascertain the source (s) of influence for smoking continuity, source (s) of influence contributing to smoking cessation and a distribution of the number of years of smoking by the respondents, frequencies and percentages were used.

3. Results

3.1. Demographic Information

Table 1. Age distribution of the participants

Age	Distribution	N	%	Cummulative %
Younger Adults	18-35 years	38	62.3	62.3
Older Adults	36-55 years	23	37.7	100%

Table 2. Educational Level

Educational Level	N	%	Cummulative %
No Formal School	2	3.3	3.3
Primary school	11	18.0	18.0
Secondary school	37	60.7	60.7
Tertiary Education	11	18.0	100.0

Table 3. Marital Status

Marital status	N	%	Cummulative %
Married	36	59.0	59.0
Single	25	41.0	100.0

The study made use of only male population and the demographic information revealed that 62.3% of the participants were younger adults while 37.7% were older adults, and their ages ranged between 18-35 years and 36-55 years respectively, bringing the mean age to 36.5 years. It was again respectively, bringing the mean age to 36.5 years. It was again revealed that the married participants were 59.0% and those who were single were 41.0%. Their educational status ranged from 3.3% for non formal school, 18.0% primary school, 60.7% secondary school and 18.0% tertiary education.

3.2. Frequencies

Table 4. Distribution of ailments and frequency of occurrence in association with age distribution among the selected motorcyclists

S/No.	Ailments	Frequency %	Age bracket (years)	Years of smoking
1.	Chest pain	32	20-30	3-5
2.	Cough and sputum discharge	25	30-43	>5
3.	High susceptibility to malaria	20	40-55	10-20
4.	Infertility/low sperm count	Nil	-	-
5.	Tooth decay	08	40-55	>20
6.	Stomach ulcers	02	30-40	5-10
7.	Osteoporosisare	Nil	-	-
8.	Cataract (poor eye condition)	Nil	-	-
9.	Wrinkling of the epidermal layer of the skin and fingers	03	45-55	10-20
10.	Dark colouration of the lips	10	40-55	>10

Table 5. Sources of influence for smoking continuity among the chosen motorcyclists in Ibadan

Variable	Frequency	Representation in percentage
Family	1	1.6%
Friends	36	59.0%
Co-workers	24	39.3%
Total	61	100%

Table 6. Source(s) of influence contributing to smoking cessation among the motorcyclists

Source type	Response (frequency)	Percentage
Formal advice	Yes (18)	29.5%
Medical doctor's advice	No (43)	70.5%
Total	61	100%

Table 7. Source(s) of influence contributing to smoking cessation among the motorcyclists

Source type	Response (frequency)	Percentage
Parental advice	Yes (42)	68.9%
Peer Advice	No (18)	29.5%
No advice	(1)	1.6%
Total	61	100%

Table 8. Distribution of the number of years of smoking by the respondents

Frequency	Percentage (%)	Years Smoked
7	11.5	10
2	3.3	11
4	6.6	12
4	6.6	15
1	1.6	17
1	1.6	18
2	3.3	1
6	9.8	20
1	1.6	21
3	4.9	2
1	1.6	35
1	1.6	37
8	13.1	3
3	4.9	4
9	14.8	5
1	1.6	6
5	8.2	6
2	3.3	8

4. Discussion, Limitations and Conclusions

4.1. Discussion

Investigation of the prevailing ailments reveal that the most prominent health problems among the tobacco smoking motorcyclists were basically chest pain, cough associated with sputum discharge, easy invasion of malaria parasites, and dry lips with dark colouration in a descending order; 32%, 25%, 20%, and 10% respectively. These ill-healths were associated with an average age of 25 years, 38 years, 47 years and 48 years respectively. The implication of these age-indicator showed that the motorcyclists in their "active years" (25-45 years) received more of the 'knocks' of sickness and consumed tobacco excessively with little or no control over urge or access to cigarettes. This uncontrollable smoking habit was evident (Table 4) with a manifestation of chest pain and cough associated with sputum discharge among the motorcyclist with a minimum smoking-age of 3 or 5 years. A Chinese based study found out that, cigarette smoking has already caused significant ill-health to the Chinese population with over 1 million people dying each year of various disorders caused by smoking. However, the peak of smoking induced diseases is still to come which has implication for anti-smoking campaigns for any smoking population. In a similarly study, effects of smoking and tobacco on the immune system and its potential impact on periodontal health were reported, saying that smokers are 2.5-6 times more likely to develop periodontal disease than non-smokers, and they found evidence for a direct correlation between the number of cigarettes smoked and the risk of developing disease [14].

Diverse factors influenced persistent smoking habits in the studied cohort. Precisely, association and pressure from family members, friends and co-workers favoured a continuous smoking habit among the motorcyclists. However, the chief contributor was pressure from friends (peer groups) that accounted for about 60% contributions (Table 5). A negligible fraction (1.6%) contribution was through family pressure, this in essence revealed a frowning disposition of family members to excessive smoking habit of their wards. The rejection of uncontrollable habitual smoking was further strengthened in Table 7 where 68.9% of parents and relations encouraged their wards to cease smoking as a major source of an informal channel. In Table 6, only 29.5% of respondents attested to formal advice to stop smoking, which is advice from medical doctors, while 70.5% had never sought medical advice to cease smoking. According to the respondents, a good number of cases of ill-health (critical cases at their peak) reached the medical doctors; however since smoking is an addictive behaviour, many smokers find it difficult to quit inspite of medical doctor's advice (Table 6). A previous study [17] found similar results which state that, interventions for quitting smoking could take a number of forms or a combination of them, to help smokers achieve abstinence. It is further stressed that, some smokers act in the advice of a health care professional in deciding to quit, while others explore other types of counselling options ranging from parental to peer advice.

Additionally, a compilation of arithmetic means towards establishing average number of years of active smoking showed that 55.8% of the respondents had been smoking for at least 1.95 years (Table 8). This implies that more than half of the sampled population recorded a minimum smoking experience of about 2 years. Summarily, the energetic youths with tender minds who are in their active age-brackets engaged highly in the cycling business in Ibadan but with uncontrollable smoking habit. Active smoking therefore stands against their well-being since it is a cankerworm eating into the fabrics of their good health.

4.2. Limitations of the Study

The limitation to this study includes the involvement of only commercial motorcyclists in Ibadan who were adults. They were respondents who were tobacco smokers with varying durations of smoking. Similarly, the area of delineation is another limitation of this study, the reason being that only three LGAs out of 11 LGAs in Ibadan were covered. The study may not be adequately generalized given the limited area covered.

4.3. Conclusions

This study aims at investigating the health impact of tobacco smoking, determining the sources of influence contributing to smoking, and exploring the variables that facilitate smoking cessation as well as exploring some demographic factors in relation to smoking and health. Tobacco use resulting in addiction is linked to various health-related risk factors. But worthy of note is the fact that, a reasonable body of literature asserted that cessation from smoking has immediate as well as long-term health benefits for man and women of all ages, reducing risk of diseases caused by smoking and improving health generally [17].

Therefore, a better degree of awareness should be channelled to the danger posed by continuous smoking, influence of friends and co-workers in the cycling-business coupled with irregular check-up at the various governments' health centers across the state and country. This awareness campaigns are achievable through jingles on the radio, advertisements in newspapers, and anti-smoking seminars and workshops in our schools and hospitals. Also, the federal and state governments should formulate and effect positive policies to limit allowable degree of smoking per day; especially for the young minds.

In essence, clinical psychologists and other mental health care professionals would find this study useful both for prevention efforts which is the most promising long-term approach for reducing tobacco use, as well as for intervention efforts.

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