" A STUDY OF FACTORS INFLUENCING CIGARETTE SMOKING HABIT AMONG SECONDARY SCHOOL PUPILS IN IBADAN"

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DEDICATED TO

My Husband 'Bayo and my Children
Olumide, Kayode and Abimbola

ABSTRACT

The study relates to the prevalence of cigarette smoking among school children. The study area is the Ibadan Municipality, where students in forms IV and V in nine schools and representing all categories of proprietorship were interviewed using a prepared questionnaire. A total of 510 students were interviewed.

The objectives of the study were:

1. To investigate the prevalence of the smoking habit among students of different age groups.
2. To find out how and why students take to the smoking habit.
3. To investigate what they know about smoking as a hazard to health.
4. Based on the findings in 1 to 3, to suggest possible ways of reducing and preventing smoking among secondary school students.

The data collected were subjected to statistical tests to establish the nature of the association between cigarette smoking and some causative factors which have been suggested in the existing literature. The analysis showed

that 20.2% of the students have smoked before while only 4.7% were current smokers. Of the current smokers, 79.2% were boys and 20.8% were girls.

Although majority of the smokers (75%) started smoking between classes II and IV in the secondary school, the habit appeared to have started in the last year of primary education. The rate of smoking was still relatively low, 70.8% smoked between 1 to 5 sticks a day and none smoked over 10 sticks a day.

With the exception of lung cancer which 85.1% of the respondents and 79.2% of the current smokers associated with smoking, the overall knowledge of the students concerning the health-hazards of smoking was very poor. The most important motivating factor was peer group effect reinforced by mass media advertisement. There was no significant association between the smoking habit of the smokers and their religious affiliation.

While the findings confirmed several previous views, doubts were cast on others thus calling for further studies.

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CHAPTER I

INTRODUCTION

There is a lot of epidemiological evidence in which cigarette smoking has been associated with cancer of the lungs and oesophagus, chronic bronchitis, emphysema and cardiovascular diseases (WHO Expert Committee, 1975). For both men and women the risk of developing lung cancer is directly related to total exposure to cigarette smoking as measured by the number of cigarette smoked per day, the total lifetime number of cigarette smoked, the duration of smoking, the age at initiation of smoking, the depth of inhalation of tobacco smoke, and the tar and nicotine levels in the cigarette smoked (United States Department of Health, Education and Welfare - USDHEW, 1973). Studies have also shown that there is a relationship between the number or amount of cigarette smoked and neonatal mortality rate (USDHEW, 1973).

Within the first ten top tobacco producers in the world, six are in the developing world, China, India, Brazil, Turkey, Korea, and Indonesia. In a four-year survey between

1974 - 1977 it was shown that the number of cigarettes manufactured in eight producing countries of the developing world-Brazil, China, Indonesia, South Korea, Mexico, Philippine and Turkey-rose by about 12.7% while in five major industrialized countries, Germany F.R., Japan, Soviet Union, United Kingdom and United States, it was only 2.4%. And with the exception of China, most of the developing countries are increasing the acreage under tobacco production. (Population Reports 1979).

Nigeria produces about 1200 million cigarettes per month; two thirds of these are consumed locally even though the average consumption of about 10 - 20 per person is considered the lowest in Africa (Lucas et al 1974). Although the annual production of tobacco fluctuates widely especially during the war years in the country, there seems to have been a general increase in production within the last eight years.

It is interesting to note that while cigarette smoking is decreasing in the United States and the United Kingdom,

it is spreading rapidly in developing countries especially among elites. Following the United States Surgeon General's report on health hazards of smoking in 1964 and up to 1970, smoking in the United States among men dropped from 52 to 42% and from 34 to 30% among women (USDHEW, 1974. Between 1970 and 1975, there was a further decrease to 39% among men and 29% among women but despite this drop in consumption, the United States exported a record quantity of tobacco products worth $1.73 billion in 1975. Although about two thirds of this export went to Europe, Middle and Far East there is an increasing evidence that the rest went to the developing world.

While Africa is said to have a low rate of smoking, the few studies that were conducted showed that the habit is fast gaining ground among both sexes in the continent. From estimates based on random urban samples, Arya and Bennetto (1971) found that 34.5 and 9.6% of men and women respectively were smokers in Kampala, Uganda. The comparative figures for Dakar, Senegal were 51.4 and 7.3% (Daylet et al. 1974 for Lagos, Nigeria, 56.2 and 15.3% (Ekeghuleye and Femi-Pearse, 1974 while in Durban, South Africa, Schaland

and Bradshaw (1969) found that 60.1% of men and 5.7% of women were smokers. These figures however were not obtained from all the urban centres in each country and may therefore not reflect the general trends in those countries.

Since the elites have been implicated as the group spreading the habit in developing countries, it is important to assess the rate among the younger educated population, especially among students. A few studies have been conducted which showed smoking rates among university undergraduate and college or secondary school students. Arya and Bonnette (1971) from a random sample estimated that 29.8% of male students and 5% of female students of Makerere University in Uganda were smokers. Also using random sample estimaton Elegbeleye and Femi-Pearse (1976) found that 72.4% of males and 22.2% of females were smokers among students of the University of Lagos; in University of Hong-Kong, these rates were 19.2% and 6.2% respectively (Bard and Peacock, 1976).

Elegbeleye and Femi-Pearse (1976) recorded a smoking rate of 40.0% and 8.4% for male and female secondary school students in Lagos from a number of a randomly selected schools. Among students in all colleges in Calcutta the average smoking rate from a survey in which all the students answered a questionnaire was 26% (Banerjee, 1963).

Because of the various effects of smoking on health, many countries at different points in time have taken various steps and measures ranging from public information to legislation to control smoking. The United States Congress in 1970 required that cigarette packs be labelled "Warning, the Surgeon General has determined that cigarette smoking is dangerous to your health". In addition, Congress prohibited radio and television advertisements in order to decrease cigarette appeals to youths. By 1973, similar bans had existed in more than twenty other countries including Russia (Oakley, 1974).

It is therefore clear that cigarette smoking has been recognised as a big health problem throughout the world. In Nigeria, however, the effect of cigarrete smoking on health has not been fully investigated. Nevertheless, cigarette smoking may be on less a problem in Nigeria (Adeniyi, 1979).

Smoking is prevalent among university students including those at Medical Schools. At one of the Nigerian Universities for example, in 1976, nearly three quarters of male medical students described themselves as tobacco users (Sunday Sketch, June 10, 1979). In developed countries twenty years of publicity about the dangers of smoking are beginning to have some effects in reducing smoking. In the developing world, however, the opposite trends seem to be at work (Eckholm 1978) Smoking is presented as a symbol of modernism and western affluence as tobacco advertisement constantly emphasizes. The advertisement captions are designed to have appeal to the educated elites in the cities and to those who were

relatively rich.

Although there are no studies which show the increasing rate of smoking in Nigeria but judging by other evidence of sales and advertisement one can say that it is on the increase. For example, Lucas and Erinosho Francis (1974) in their study compiled data which showed that since 1935 when the first cigarette factory was opened in Nigeria, there has been a steady increase in the cultivation of tobacco and this they attributed to a response to an increased demand. They found out that the locally produced raw tobacco which stood at 8,900 metric tons in 1957 was almost doubled in 1971, reaching 17500 metric tons. Also, the number of factories had increased from one to four by 1979 (and located in different parts of the country. Report in the Central Bank of Nigeria's Annual Report (1977) suggest that a substantial amount of the increased home production must have been consumed locally. For example, the report of consumer price indices for Lagos shows that between 1976 and 1977 tobacco and kolanut had the highest percentage increase of 41.1% for the middle income group which is twice as much as the average for all consumer items which

stood at 20.9%. The same report shows a 62% increase in the exercise duties on tobacco between 1975 and 1977. Smoking habit is taken up at about the same age as in the advanced countries. In Ibadan, capital of Oyo State, Sofowora (1974) found that smoking is taken up at about the age of 12 - 13 and the practice is higher among boys from broken homes who helped the touts. These boys start by picking up any butts thrown away by their masters for a few puffs until they can afford to buy their own.

This study will investigate the extent of the smoking problem among students of different age groups in a sample of secondary schools in the city of Ibadan. It will focus primarily on the assessment of cigarette rates among the students, how and why they take to smoking and their knowledge about smoking as a hazard to health. From the findings, suggestions will be made as to the w possible ways of reducing the smoking rate among secondary school children through health education processes aimed at prevention and cessation.

CHAPTER 2

LITERATURE REVIEW

Historical Background

Cigarette is shredded tobacco rolled in thin paper. Tobacco is obtained from the tobacco plant genus Nicotiana of which there are over sixty species out of which two Nicotiana tobacum and Nicotiana rustica are widely grown in over 100 countries today. The most active ingredient of tobacco is Nicotine but tars and resins in the smoke are given off when tobacco burns.

The early interest in tobacco seemed to have been in its medicinal value. Stewart (1967) noted that tobacco was used for abscesses and sores on the head, cold or catarrh and persistent headache as early as 1529. With the discovery of the medicinal value of tobacco it was widely and freely used in Europe in the 15th century. Sir Anthony Chute in 1595 summarised the medicinal value of tobacco thus "Anything that warms a man inwardly from his girdle upward

might be removed by a moderate use of the herb". The original concern about cigarette was the fire hazard involved in smoking, not the individual health. Thus in 1798 the Government of Brison, one of the American colonies, forbade anyone from being in possession of a lighted pipe or cigar in public streets (Oakley 1972). This was more of an era of tobacco chewing than smoking. By the beginning of the 19th century cigarette smoking was beginning to appear in the American Society much earlier than in Europe when the first cigarette factory was opened in Britain in 1856.

Opposition to cigarette smoking became stronger early in the 20th century. Oakley 1974) reported that New York made it illegal for women to use tobacco publicly and were expelled from schools and dismissed from jobs for smoking. By 1939 it was reported that there was an increase in the incidence of pulmonary carcinoma due largely to cigarette smoking (Oakley 1974).

In a long term study on the effect of smoking on health, it was reported that the death rate of cigarette smokers from cancer of the lung among British Physicians was thirteen times the rate of non-smokers and that the death rate of heavy smokers (25 or more cigarette a day) was over thirty times the rate of non-smokers (Doll et al 1964). In 1964, an Advisory Committee set up by the United States Surgeon General declared that smoking is causally related to lung cancer in man. Similarly, studies from several countries have confirmed that cigarette smoking is one of the major risk factors contributing to the development of peripheral vascular diseases. Cigarette smokers have higher death rates from pulmonary emphysema and chronic bronchitis and more frequently have impaired pulmonary function and symptoms of pulmonary disease than non-smokers.

Although tobacco had been known in Europe as far back as the 14th century (Oakley 1974), its use was unknown in Nigeria until the 15th century when we began to make

regular contact with the Europeans (Lucas et al 1974) Cigarette, manufactured chiefly form flue - cured tobacco, is therefore most likely an exotic habit introduced into Nigeria probably around 1902 (Lucas, Erinosho).

Except for the period covering the Nigerian civil war, there had been a steady increase in the consumption of cigarette according to the Nigerian Tobacco Company Limited Reports (1964 - 73).

Health Problems Associated with Cigarette Smoking.

In Nigeria Epidemiological studies on smoking related diseases have been scanty. Pemi-Pearse and his colleagues in 1973 found a significant association between morning phlegm or simple bronchitis and cigarette smoking among a sample of patients treated for bronchitis in a Lagos hospital.

Sofoluwa (1974) also showed that there was some association between smoking and bronchitis among bronchitic Patients in the University College Hospital, Ibadan, although to a much smaller extent than in Western Countries. But Orillo

and Sofowora (1971) in a review of cases from the Thoracic Unit of the same hospital found no association between primary tumour of lungs and pleura and cigarette smoking.

Also no evidence of the occurence of metabolic complications of cigarette smoking has been found among Nigerians. Though chronic cyanide intoxication of dietary origin (mainly due to cassava) occurs in some areas and is associated with syndrome of tropical chronic ataxic neuropathy (Osuntokun, 1971) and serum level of thiocyanate are higher in smokers than in non-smokers, smoking does not play an important role in the frequency and distribution of this disease. In a review of 8,672, consecutive patients who were seen at the eye clinic of Ibadan University Teaching Hospital over a 10-year period, no case of tobacco amblyopia was encountered (Olurin, 1974).

Cigarette Consumption Rate and Patterns in Nigeria

The Nigerian Tobacco Company in 1974 did a country wide survey and found out that, generally, Nigerians are not heavy smokers. Nigeria follows Sudan closely as countries where cigarette are least smoked in Africa. The available data calculated on cigarette consumed per person per month in Nigeria Sudan and United States of America are 9, 6, and 265 respectively (Lucas et al, 1974.)

Studies conducted by Fomi-Ponrao et al (1973) and Sofowora (1974) show that new smokers start from ages ranging from 12 to 19 years whereas the NTC (1974) report shows that the heaviest smokers are in the 26 - 35 years age group. In this study it was shown that in rural areas unskilled

workers smoked heaviest, and this includes peasant farmers, fishermen, hunters, woodcutters, and cattle herders.

Feni-Penrac (1973) and Sofowora (1974) found little differences in the prevalence rates of smoking between urban and rural males while the NTC annual report (1974) confirm that those of them in the urban areas smoke more heavily than those in the rural areas.

Factors Influencing Smoking Behaviour

The process of adoption of smoking is very complicated and influenced by several factors. In a report submitted by the committee on Youth to the USDHEW, a critical analysis on teenage population indicate that there are many environmental factors that affect the initiation of the smoking habit, but by far the strongest influence is the smoking behaviour of parents and siblings.

Daniel et al (1959) carried out a study of smoking behaviour among high school students in the United State focusing mainly on parental and family influences. They found that if both parents smoke the teenager has about twice the likelihood of being a smoker than if neither parent smoke

(the rate are 18.4% and 9.8% respectively). If an older brother or sister smokes, the teenager is twice as likely to become a smoker himself and this likelihood is increased if the parent also smokes. The lowest level of smoking is found among teenagers who lives in non-smoking households; less than 1 in 20 of these have become regular smokers (4.2%) compared with 1 in 4 (24.9%) who live in the families with at least one parent and/or older sibling who smokes. Apart from family or parental influence it was also shown that regular cigarette smoking consistently rises with each successive school year and is more frequent among boys than girls. This regularity is highest among the children of families in which both parents smoked cigarettes, (31.9% of boys, 18.5% of girls), intermediate in children in which only one parent smokes cigarettes (25.9% of boys, 13.1% of girls) and lowest in children in which neither parent has ever been a smoker (16.7% of the boys, 6.8% of the girls) They found that the smoking behaviour of boys tend to conform more closely to that of the father, whereas that of the girls follows more closely to

that of the mother. If the father is the only parent who smokes 26.5% of the boys smoke as against 23.6% in families in which the mother is the only parent who smokes. Among girls 12.1% smoke if the mother is the only parent who smoke and only 12.4% if the father is the only smoker. In their discussion Harley and Robinson (1976) also suggested that the tendency of teenagers to regard smoking as pre-requisites for social acceptance among their peers and as a sign of sophistication, glamour and manliness is a contributory factor which, in no small measure, influences smoking habit.

Elegbeleye and Femi-Pearce (1974) in their study of smoking habits of secondary schools and Medical School students in Lagos, found a significant association between the smoking habit of secondary school students and the smoking habit of both their friends and parents whereas with the Medical Students their smoking habit was influenced mainly by that of their friends. In this study it was shown that 90% of the smokers started between 12 - 15 years and the reasons given for smoking include to improve, for concentration, to reduce anxiety and nervousness and for fun.

Classification of Theoretical Concepts and Models for Explaining Smoking Behaviour

According to Adeniyi (1979) there seem to be two main groups of theoretical concepts underlying most of the models that have been applied to change smoking behaviour:

(a) The first group approaches smoking from the standpoint of health hazards associated with the behaviour i.e. health related point of view.

(b) The other approaches smoking from a comprehensive point of view that goes beyond its health significance.

The first group of concepts can be described as having a value - expectancy as their central theme and is typified by Lewins (1935) theory which is dependent on two variables:

(a) The value placed by an individual on a particular behavioural outcome.

(b) The individual's estimate of the probability that a given action will result in that outcome.

The group can be credited to Korl and Cobb (1966) who offered a conceptual definition of health related behaviour

to which one might trace the concept now known as Health Related Behaviour Model. Kasl and Cobb (1966) identified three types of health related behaviour:

(1) Behaviour related to prevention (health behaviour)

(2) Behaviour once symptoms appear (illness behaviour)

(3) Behaviour following diagnosis (sick-role behaviour).

Saric 1969 modified this approach and identified another type of health related behaviour which he called at risk role behaviour which he explained on the awareness and belief that one is likely to fall sick because one is exposed to or unprotected against disease. He therefore proposed two stages of health behaviour:

(1) A stage at which behaviour is not "health directd" or "health motivated".

(2) A stage at which health behaviour is triggerred off by the perception of being at risk.

An important limitation of the Health Related Behaviour Model is its conceptualising the four types of health related behaviour as either an antecedent to or a follow-up of the

diagnosis of a disease in an individuals (Adeniyi 1979). The implication of this according to Adeniyi (1979) is that behaviour ceases to have meanings except in relation to specific associated diseases. This has a far reaching consequences on researchers in this area who might be led into looking at smoking exclusively as health related issue forgeting the other non-health but yet important dimension of smoking behaviour. For example, Muller (1978) submitted that the effect of smoking on the political economic, social and cultural standard of the third world people seemed to be more appreciated than the health effects of smoking. Therefore in these areas these non-health related effects of smoking must be considered if the problem of smoking is to be effectively tackled. It seemed therefore that the health related behaviour model is inadequate as a basis for developing behavioural change strategies for smoking. On the other hand, the Multiple Causality concept - takes a comprehensive view of smoking beyond the domain of health and illness. It suggests that any behaviour should not be viewed as acting alone but as operating within a complex of other influencing factors. Various theories stressing this concept include

Cartwright (1949) Reissmans (1950) and Lionberger (1960). These theories blend together social and environmental fa with individual psychological factors and show that their interactionnl effects predispose to the adoption of smoking behaviour. The multiple causality concept therefore recogn individual differences between smokers and thus appropriate for the use of behavioural modification techniques in smoking cessation (Adeniyi, 1979).

A Review of Models Applicable to the Two Theoretical Concepts

Adeniyi (1979) provided this categorization of models.

A Health - related (value -expectancy) concept

(1) Health Belief Model (HBM) Hochbaum, et al (1958)

(2) Sick-Role Model (Parsons 1951)

(3) At Risk Model(Haric 1969)

B Multiple - causality concept:

(1) Health Locus of control (Rotter 1966)

(2) Psycho-social Model (Horn, Tomkins (1966, 1968)

(3) The Situation Specific Model (Best and Nakatien 1977)

(4) The Stimulus Response Psychosocial Model or the Antecedent Predisposing Enabling and Reinforcing Factors Model (Green, 1975).

(5) Behaviour Intensions Model (Fishbein).

Only a few of those models (the HBM, the sick role model, the at-risk model, the situation specific model and the behaviour intention model) which apply to this study will be reviewed. How they are applied in the design of the instrument for this study will be shown in the chapter III under instrument design.

THE HBM

Assumes that motivation is a necessary condition for action because motives selectivity determine an individuals perception of his environment. The motivation in this case is a health goal and the main purposes of seeking the goal is to avert the consequences of not seeking it (which are undesirable). Therefore in addition to value, fear can also be implicated as another type of motivation. But it has been pointed out earlier on that a health behaviour can be influenced by non-health values and herein lies the weakness of the HBM with respect to smoking. Thus most of the work on educational interventions based on HBM that has been done was

based on threatening health communication or fear arousal, and various success rates of fear arousal strategies in smoking behaviour change have been reported (Miloo 1964 Leventhal and Watts, 1966, Leventhal and Kirscht 1966 and McConnel and Thomsen (1967).

The Sick Role Model

This health-related behaviour conceptualized by Kasl and Cobb (1966) is defined as "the activity undertaken by those who considered themselves ill for the purpose of getting well". It represent an attempt to fuse together a sociological model of illness with a medical model of illness. Thus it treats illness and health as two extreme positions on a scale whereby the various position between them can represent states or degrees of illness or health. In general the model tends to believe that the diagnosis of smoking related diseases in an individual will motivate the individual to quit the smoking habit.

Thus like the HBM it focuses on the value or the attractiveness of health to provide motivation for behaviour l change. Studies based on this model are either inconclusiv (Windsor 1977) or that cessation of smoking was unrelated to severity of symptoms (Burns 1969, Mausner 1970).

At Risk Model

Formulated by Saric (1969) this model has a two dimensional approach to health-related behaviour. It states that "if the information a person received is in form of a symptom (sickness), then the person will move along the net work of curative medical services beginning with information to decision and then to action which legitimizes his sick role. But if on the other hand, the information is in form of risk factors (health hazard of smoking), the person move through the same three steps but along the network of preventive health services.

It differentiates between generalized and personlised health risk beliefs, offers a clearer way of explaining health

motivated actions and suggests how ways by which smokers can further be categorized to predict the effectiveness of health information. Unlike the sick role model which is easier to influence because it enjoys social sanction through institutionalized medicine, at risk role model has no legitimate role in society and is therefore more difficult to influence.

The Situation Specific Model

Credited to Best and Mekstein, the Situation Specific Model can be regarded as a modification of the psycho-social model with a lot more emphasis on observable cues to smoking.

It sought to relate the different psychological functions which have been identified by previous models to specific environmental circumstances. In smoking behaviour change an environmental cause can be an easier target for change than psychological cause because the former is directly observable and can be monitored (Adeniyi, 1979).

Behavioural Intensions Model

The Behavioural Intension Model (Finhbein and Ajzens 1973, 1975) focuses mainly on prevention of smoking by

looking at the decision process which precedes behaviour (Behavioural Intension, BI)

According to the model, two major factors determine BI. these are personal and social factors. Thus the decision to smoke is a two step process involving the information stage and the decision stage. The BI model therefore tries to explain why people decide to smoke and not why people should not smoke peculiar to the at-risk role, the sick-role and the HBM models. Smoking decision according to the model, is a choice between alternative and can be affected in many ways. This model has not been explicitly tested with smoking behaviour.

From the review of these various models, Adeniyi (1979) concluded that no single model is adequate enough to explain smoking behaviour because its determinants are different, complex and vary from person to person.

According to Adeniyi (1979) most of the models are operating from a prior theoretical notions and therefore it seems that each of the models is best suited for particular levels of smoking behaviour rather than smoking behaviour

in general because of their respective specificity to only a limited number of change variables operating in a given health problem. It thus becomes imperative to identify the level of intervention at which the potential of a model can be optimized and then to choose the model most appropriate for each level.

CHAPTER 3

AREA OF STUDY SAMPLING PROCEDURE INSTRUMENT DESIGN, HYPOTHESES, ANALYTICAL METHODS

The literature review in chapter 2 highlights the following views which can be investigated in any urban area.

1. That smoking tends to start at school age.
2. That certain economic, social and behavioural factors or influences contribute to this practice.
3. That smoking can be linked to certain health hazards.
4. That the habit can be checked by adopting educational methods.
5. That smoking rate is higher in urban than rural areas of Nigeria.

Accordingly, the present study is based in the city of Ibadan which is not only highly urbanised but also has a large school population.

Area of Study

The area of study is Ibadan, the capital of Oyo State. It has an estimated population of 1.2 million (1963 census). The specific area of study is the Ibadan Municipal Government Area.

According to the State's Ministry of Education Record 1979/80, there are 234 secondary schools in the State out of which 38 are located in the specific area of study (Appendix D).

It is a cosmopolitan area with high degree of industrial activities. Before the creation of more states in 1976 it used to be the capital of the old Western State which is now made up of Oyo, Ogun, and Ondo States. In this capacity it attracted quite a lot of people from all corners of the region resulting in a high degree heterogeneity of the school populations and consequently different shades of character are to be expected.

By virtue of this central position it was and still is in certain cases the headquarters for providing both radio and television programmes to the adjoining states of Ondo, Ogun, Kwara, as well as nearby states of Lagos and Bendel. Teenagers in this area are therefore likely to be more accessible to mass media advertisement which are bound to affect their moral and social values.

Sampling Procedure

Some of the existing studies (Olumide and Adeniyi 1978) on smoking among school age children have shown that associations exist between cigarette smoking and various characteristics of the school children such as age, family background, type of school (male, female, co-educational) and school affiliation with religious organization. These associations provided a useful basis for stratifying the sample population.

The need to focus on secondary school pupils in their last two years in this study has been justified by Olumide and Adeniyi who found a very low smoking rate among primary pupils in their last two years in Ibadan and Elegbeleye and Femi-Pearse (1974) who found that the school children were usually initiated into smoking when they attained the age of 14 - 16. Most secondary school pupils in their last two years belong to this age group. Therefore this study focused on this age group.

As to family background Afolabi (1978) showed that children in certain schools come mostly from middle-class families, especially government owned schools, on the other hand, most children from single owned private schools tend to come from low-income families. The sampling was therefore designed to

representative of medium income and low-income parental schools. Although the government had taken over all the schools in Oyo State, many schools still retained their traditional traditional association with their original proprietors, especially those schools which were founded by religious bodies or groups (Afolabi, 1978). Teachers in religious affiliated schools were still expected to uphold among their children the religious ethics and norms of the founding proprietors. There was therefore a need to sample in such a way to reflect different types of proprietorship.

There is also evidence that school age children smoke as a mark of maturity and also to impress others especially the opposite sex. It was therefore anticipated that pupils in co-educational schools and the opportunity to interact more with the opposite sex and might have different attitude to smoking than others who are not in mixed schools. Sex compositions of schools and could therefore be another basis for stratification. In order to obtain a representative sample based on these evidences, the 38 schools in the Ibadan Municipal Local Government Area were first classified according to their affiliation before the government take-over of schools, i.e. according to their original proprietors or founders. The four categories identified were: Government proprietorship,

christian proprietorship, muslim proprietorship and private proprietorship. The later category included schools owned by individuals and those were proprietorship could not be classified (Appendix B).

The schools in each category were then stratified into two groups - low income parentage, and middle income parentage (Afolabi, 1978). One school was randomly selected from each stratum to make a total of eight schools. A ninth one school, the International School, Ibadan, was selected as a special school, because of its unique status (Appendix C). Most of the children in this school were from elite upper middle class homes and of various nationalities. From each selected school, one arm in each of classes four and five was randomly selected. Therefore a total of eighteen (18) classes in the nine (9) schools were investigated. The total number of pupils in these classes was 510 all of which were interviewed.

Instrument Design

The instrument for this study is a questionnaire. Selection of items in the questionnaire was based on the theoretical concepts and models which are decided to be applicable and relevant to smoking behaviour of school children in Nigeria judging from the available evidence in the literature review and the personal experience of the researcher.

Health Belief Model These ore items pertaining to the students knowledge about cigratte smoking and its health hazards, their percieved susceptibility to the smoking related diseases, their percieved seriousness of the diseases and their percieved benefit of not smoking. These items are questions 17 and 18 in Appendix (A).

At-Risk Model These are items pertaining to the willingness or readiness of the students (smokers) to stop smoking on being aware of the health hazards of smoking. These are questions 13 and 14 in Appendix A.

The Situation Specific These are items pertaining to the identifying and investigations of occations or situations in which respondents are more likely to smoke. These items are questions 56, and 10.

Behavioural Intension Model These Are items pertaining to the reasons why they decide to smoke and not why they should stop. This thus helped in knowing those who smoke by asking such an attitudinal question as " boys may smoke but it is not appropriate for girls to smoke".

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Behavioural Intension Model These are items pertaining to the reasons why they decide to smoke and not why they should stop. This thus helped in knowing those who smoke by asking such an attitudinal question as " boys may smoke but it is not appropriate for girls to smoke".

2. Administration of Questionnaire

A prepared questionnaire (see Appendix A) was administered by the investigator to obtain information on demographic variables, smoking history, knowledge about smoking and smoking rate. This questionnaire was administered in the absence of the teacher in each class with the permission of the principal.

The students were assured of the anonimity of the questionnaire in order to get full cooperation and obtain a reliable answer from the students. The questionnaire was pre-tested for reliability and validity. As a result, some questions which were ambigous or difficult to understand were changed before the main study commenced. The questions except a few open ended ones were pre-coded. Each pre-coded questions had four (4) possible answers ... "Yes", "No", "Not applicable" and "No response". "Not applicable" implied that certain questions were peculiar to smokers only, hence such question were not answerable by non-smokers. "No response" implied that the question was left unanswered.

Hypotheses

1. That there is a significant association between the smoking status of parents and that of the offsprings. In other words, children from parents who smoke are more likely to become smokers than children whose parents do not smoke.
2. That there is association between cigarette smoking status and type of religion of smokers.
3. That there is association between rate of smoking and sex of smokers. It is generally believed that the rate among boys is higher than that of girls.
4. That there is an association between the smoking habit of adolescents and that of their peer members.

Analysis

A computer analysis based on the programme of the Statistical Package for the Social Sciences (SPSS) was used to compile the frequency tables on variables of interest. Chi-square (χ^2) analysis was used to test the association between some selected variables of interest. This method

has the advantage of wide applicability and non-assumption of normal distribution of the data basis. In short, it is a non-parametric analytical technique which comes handy in studies as the present one.

CHAPTER 4

DATA ANALYSIS AND FINDINGS

A. DEMOGRAPHIC VARIABLES

Out of the 510 respondent, 288 (56.5%) were males,222 (43.5% were females, 299 (54.7%) were in class four and 231 (45.3%)were in class five.

Similarly when the religion of each pupil interviewed was examined 362 (71.0%) were christian, 141 (27.6%) were muslims, others such as traditional religion constitute only 5 (1.0%). Christian to muslims were in the approximate ratio of 3:1.

The occupation of the parents of respondents were used to assess the economic class of the 510 pupils. This was because many respondents did not know the income of their parents. According to the socio-economic class categorisation adopted for this study (see occupation Appendix A). 48.7% of the fathers were ranked as upper socio-economic class whereas 31.2% of the mother could be so ranked. Doctors, Lawyers, Senior Civil Servants, Administrator, Lecturer, Engineer and Accountant were grouped as high socio-economic class (1) Nurse, Graduate Officer in the government or company, Secretary, Business or Trading, Pensioner

were grouped as middle-class socio-economic class (2) Typist, Labourer, Bricklayer, petty trading/Business, farmer, unemployed housewife were grouped as low-income socio-economic class (3) and 4) Appendix A). Business or trading is a broad occupational categorization and on the average, was regarded as approximating anything from middle to lower, economic status. 53.7% of mothers belong to this class as compared with 30.6% of the fathers. It was not surprising that less than 6% of the parents were farmers since the study was carried out in a city.

Table 1: Marital Status of Parents

	Living together	No %	Separated	No %	Divorced	No %	NR	No	Total	
N	40		40		15	3.1	53	10.4	510	100
%		78.8		7.8						
% of smokers	23	4.5	1	0.2	0	0	0	0	24	4.7

The presence or absence of the influencing effect of both the father and mother in the family play an important role in the social adjustment or maladjustment of children.

A broken home has been regarded as an influencing factor in cigarette smoking habit (Sofowora, 1974). In this study only 10.9% can be regarded as coming from broken homes (Table 1) but this factor does not seem to affect the smoking behaviour of the respondent. 63% of the pupils in this study have lost their fathers whereas 1.6% have lost their mothers, table 2.

Table 2: Percentage of Parents Living and Dead

	Living %	Dead %	NR %	Total
Father	365(71.6)	32(6.3)	113(22.2)	510(100.0)
Mother	383(75.1)	8(1.6)	119(23.3)	510(100.0)

B. SMOKING PROFILE OF RESPONDENTS

1. Past and Current Smoking Status

Out of 510 respondents (103) 20.2% have smoked cigarette at one time or the other in the past, but only 4.7% are still currently smoking. Those current smokers come mostly from what can be regarded as upper class schools as International Schools, Government College and Queen's school.

2. Previous Attempt to quit

Of the 4.7% (24) current smokers 58.3% (14) admitted making any effort at stopping in the past and the same percentage (58.3%) also indicated current willingness to stop.

3. Smoking Initiation

Table 3 shows the distribution of current and ex-smokers according to the classes in which they were when they started smoking.

Table 3: Classes of smokers (current and ex-smokers only) at the time of initiation

	(N)	(%)
Primary	13	12.6
Class I	4	3.9
Class II	17	16.5
Class III	35	34.0
Class IV	30	29.1
Class V	4	3.9

N = 103

Table 4: Percentage of Current Smokers who claimed to have been influenced by Mass Media Advertisement

	Newspaper	Magazine Advertisement	Radio Advertisement	Television Advertisement
N	6	6	4	3
%	25.0	25.0	16.7	12.5

N = 24, Multiple answers were allowed.

Mass media advertisement has been implicated as a major influence in smoking initiation among the youths. Table 4 shows that the mass media has been regarded by the current smokers in this study as one of the major influence in their process of smoking initiation.

4. Consumption Rate

Consumption rate of current smokers is shown in Table 5. These smokers may be described as experimenters as most of them smoke less than 5 sticks per day.

Table 5: Consumption Rate

No of sticks smoked per day	(%)
1-5	70.8
6-10	16.7
11 and above	0.0
NR	12.5
	100.00

N = 24

Of the current smokers (Table 6) 45.8% inhale the smoke only moderately while a sizeable proportion 37.5% do not even inhale the smoke at all.

Table 6: Inhalation habit of current smokers

	No	%
Not at all	9	37.5
Moderately	11	45.8
Deeply	4	16.7
Total	24	100.0

5. Reasons for smoking habit maintenance

According to Table 7, these smokers could be described as pleasurable relaxation and tension reduction smokers.

Table 7

Reasons for smoking (current and ex-smokers)

Reason	(%)
To relax	33.9
For energy	20.4
For fun	33.9
To impress others	33.9
For concentration	20.4
To prevent nausea	8.7
To stay awake	8.7
To enjoy life	12.6
To reduce anxiety	33.9

Based on N = 103
(Multiple answers were allowed).

6. SMOKING RATE AMONG PARENTS AND PEER GROUP

There is a clear indication that the rate of smoking is higher among male parents than female parents and is in the order of approximately 5:1 (14.1% to 2.7%). Table 8. Similar trend is found among male peer group and female peer group where the magnitude is of the order 4:1 (13.9% to 4.1%).

7. SITUATION IN WHICH RESPONDENTS SMOKED

Table 9 shows result of this investigation. The common avenue of interaction between peer group - social party ranks highest with 69.9% as the usual avenue for cigarette smoking. This is followed closely with 66% when in company of friends.

Table 8: Smoking habit of significant others, parents and peer groups

	Father	Mother	Boyfriend	Girlfriend	Roomate in the Hostel
N	72	14	71	21	82
%	14.1	2.7	13.9	4.1	16.1

N = 103

* Multiple answers allowed for each respondent.

Table 9: Situation under which respondent (current and ex-smokers) smoked

	%
In a social party	69.9
In a company of friends	66.0
When in the toilet	13.6
After Meal	17.5

N = 103

* Multiple answers allowed for each respondent.

C. HEALTH PROFILE OF SMOKERS

Table 10 shows that all the eight symptoms commonly associated with smoking are not uncommon among the smokers of the study population. One of the other of the smokers had experienced one or the other of the symptoms. It appears however that cough and sorethroat top the list with a total of 68.9%. This is closely followed by loss of appetite with 31.1%. Nervousness and fast pulse are still relatively low with 16.5 and 12.5% respectively.

Table 10: Symptoms of Health-related diseases of smoking experienced by respondent (current and ex-smokers)

	Yes (%)	No (%)
Cough	50 (48.5)	34 (33.0)
Sorethroat	21 (20.4)	51 (49.5)
Nervousness	17 (16.5)	43 (41.7)
Fast Pulse (Rapid heart. bea	13 (12.5)	59 (57.3)
Dizziness	23 (22.3)	43 (41.7)
Copious Sputum	16 (15.5)	43 (41.7)
Lack of appetite	32 (31.1)	42 (40.8)
Sinus (Nasal) Trouble	12 (11.7)	37 (37.9)

D. KNOWLEDGE ABOUT HEALTH HAZARD OF CIGARETTE SMOKING

Table 2 shows that most of the study population were fairly knowledgeable about diseases associated with smoking. Interestingly enough 85.1% of the respondents associated cancer of the lungs with cigarettes smoking. In comparison the respondents' knowledge regarding emphysema, peptic ulcer and hypertension are still relatively low. Table 12 also show that the knowledge of current smokers about the diseases and symptoms associated with cigarette smoking except lung cancer was very poor.

Table 11: Health knowledge respondents with respect to disease associated with smoking

	YES (%)	NO (%)	NR (%)	TOTAL (%)
Lung Cancer	434 (85.1)	39 (7.6)	37 (7.3)	510 (100.0)
Headache	149 (29.2)	261 (51.2)	100 (19.6)	510 (100.0)
Common Cold	76 (14.9)	323 (63.3)	111 (21.8)	510 (100.0)
Emphysema	172 (33.7)	236 (46.3)	102 (20.0)	510 (100.0)
Bronchitis	235 (46.9)	181 (35.5)	90 (17.6)	510 (100.0)
Stomachache	140 (27.5)	267 (52.4)	103 (20.2)	510 (100.0)
Peptic Ulcer	203 (39.8)	213 (41.8)	93 (18.2)	510 (100.0)
Hypertension	172 (33.7)	238 (46.7)	100 (19.6)	510 (100.0)

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Hypertension	172 (33.7)	238 (46.7)	100 (19.6)	510 (100.0)

Table 12

Knowledge of current smokers about diseases and symptoms associated with cigarette smoking

	YES (%)	NO (%)
Nervousness	4.2	95.8
Emphysema	16.7	83.3
Bronchitis	33.3	66.6
Peptic Ulcer	20.8	79.2
Hypertension	16.7	83.3
Lung Cancer	79.2	20.8

N = 24.

E. GENERAL ATTITUDE, BELIEFS AND OPINIONS ABOUT SMOKING

1. Attitude to Regulatory Measure

Table 13.1 above the attitude of respondents to cigarette smoking. There is a very strong feeling among respondents that students should not be allowed to smoke within the school

premises and that in fact it should be banned. In each cases 81% of the respondents agreed to the propositions.

There was a general feeling that boys had no more right to smoking than girls. Also over 70% of the respondents believe that teachers who smoke cannot be morally justified in asking his students not to smoke.

Table 13 : 1 Attitudes of Respondents to Regulatory Measures on Cigarette Smoking

	Agree	Disagree	Partly Agree/Disagree	No Opinion	NR.
The School Authority should ban cigarette smoking in schools	413 (81.0%)	23 (4.5%)	47 (9.2%)	20 (3.9%)	7 (1.4%)
A teacher who smokes cannot be morally justified in asking his pupils not to smoke	328 (64.3%)	84 (16.5%)	63 (12.3%)	22 (4.3%)	13 (2.5%)
Boys may smoke but it is not appropriate of girls to smoke	135 (27.3%)	208 (40.8%)	94 (18.4%)	58 (11.4%)	11 (2.2%)
Cigarette smoking is entirely the smokers' business and not anybody's concern	122 (23.9%)	241 (47.3%)	76 (14.9%)	55 (10.8%)	16 (3.1%)
Students should be allowed to smoke in the school campus	39 (7.6%)	412 (81.0%)	31 (6.1%)	17 (3.3%)	10 (2.0%)
If my parents smoke I should smoke	30 (5.9%)	398 (78.0%)	49 (9.6%)	23 (4.5%)	10 (2.0%)

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Students should not smoke	30 (5.9%)	398 (78.0%)	49 (9.6%)	23 (4.5%)	10 (2.0%)

7. Popular Beliefs about Smoking

The popular beliefs about cigarette smoking among youths which had been found in literature does not seem to hold for this study. Table 13.2 shows that most of the respondents i.e. 64.5% disagreed with the statement that smoking helps one make new friends, 65.5% disagreed with the statement that smoking helps one feel grown up, while 64.9% disagreed with the statement that smoking makes one acceptable to friends.

Table 13.2: Population Belief about Smoking

	Agree	Disagree	Partly/ Agree Disagree	No opinion	No Response
Smoking helps to make new friends	62 (12.2%)	329 (64.5%)	76 (14.9%)	34 6.7%	9 (1.8%)
Smoking causes Heart Diseases	360 70.6%	44 (8.6%	53 (10.4%)	39 7.6%	14 (2.7%)
Smoking helps one feel grown up	56 (11.0%)	334 (65.5%)	59 (11.7%)	50 9.8%	9 (1.8%)
Smoking is Bad for one's Health	397 (77.8%)	32 (6.3%)	52 (10.1%)	13 2.5%	16 (3.1%)
Smoking makes one acceptable to friends	47 (9.2%)	331 (64.9%)	73 (14.3%)	48 9.4%	11 (2.2%)

F. HYPOTHESES

Four of the hypotheses which have been tested in previous research on adolescents smoking behaviour have been tested to determine their applicability to the study population. They are as follows:

1. That there is a significant association between the smoking status of parents and that of the offsprings. In other words children from parents who smoke are more likely to become smokers than children whose parents do not smoke (Tables 14 & 15).
2. That there is association between cigarette smoking status and the type of religion of smokers (Table 16).
3. That there is association between rate of smoking and sex of smokers. It is generally believed that the rate among boys is higher than that of girls (Table 17).
4. That there is an association between the smoking habit of adolescents and that of their peer members (Tables 18 and 19) The fidding in respect of the four hypotheses are as follows:

Hypothesis 1. See table 14 for comments
2. See table 16 for comments
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2. See table 16 for comments
3. See table 17 for comments
4. See tables 18 & 19 for comments

TABLE 14

Relationship between the Smoking Status of Pupils and that of their Father

FATHER SMOKING

PUPILS SMOKING	YES	NO	TOTAL
YES	6	18	24
NO	66	420	486
TOTAL	72	438	510

X^2 = 1.921

Corr Yate

DF = 1

.20 > P > .10

Hypothesis I

Table 14 and 15 show that there is no significant association between smoking status of current smokers and that of their fathers and mothers respectively.

TABLE 15

Relationship between the Smoking Status of Pupils and that of their Mother

MOTHER SMOKING

PUPIL SMOKING	YES	NO	TOTAL
YES	2	22	24
NO	12	474	486
TOTAL	14	496	510

Calculated X^2 = 1.33

Corr. Yate

DF = 1

$0.30 > P > 0.20$.

TABLE 15

Relationship between the Smoking Status of Pupils and that of their Mother

MOTHER SMOKING

PUPIL SMOKING	YES	NO	TOTAL
YES	2	22	24
NO	12	474	486
TOTAL	14	496	510

Calculated X^2 = 1.39

Corr. Yate

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0.30 > p > 0.20.

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Corr. Yate

DF = 1

0.30 > P > 0.20.

TABLE 16

Relationship between the Smoking Status of Pupils and their Religion

RELIGION

SMOKING	CHRISTIAN	MOSLEMS	OTHERS	TOTAL
YES	17	6	1	24
NO	326	130	6	462
NR	18	5	1	24
TOTAL	361	141	8	510

Calculated X^2 = 1.013

DF = 2

0.70 > P > 0.50.

Hypothesis 2

Table 16 shows that there is no significant association between the smoking status of respondents and their religion. In other words a significantly higher number is not found in any one religion more than the other.

TABLE 17

Relationship between the current smoking status and sex of the Pupils

VAR: 2 SEX

CURRENTLY SMOKING	MALE	FEMALE	TOTAL
YES	19	5	24
NO	269	217	486
TOTAL	288	222	510

X^2 = 6.35

Df = 1

$.02 > P > .01$

Hypothesis 3

There is a significant association ($P < 0.02$) between the smoking status and sex. The findings confirm the previous ones that smoking is more of a male than a female habit.

TABLE 17

Relationship between the current smoking status and sex of the Pupils

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YES	19	5	24
NO	269	217	486
TOTAL	288	222	510

X^2 = 6.35

Df = 1

$.02 > P > .01$

Hypothesis 3

There is a significant association ($P < 0.02$) between the smoking status and sex. The findings confirm the previous ones that smoking is more of a male than a female habit.

TABLE 18

Relationship between the smoking habit of students and that of their boyfriend smoking

BOYFRIEND SMOKING

SMOKING	YES	NO	NR	TOTAL
YES	9	9	6	24
NO	58	351	53	462
NR	4	12	8	24
TOTAL	71	372	67	510

Calculated χ^2 = 27.94

DF = 4

P < .01

Hypothesis 4

Table 18 & 19 show that there is a significant association ($P < .01$) between smoking habit of students and that of their peer groups, boyfriends and girlfriends respectively. Boys and Girls whose girls/boyfriends smoke, smoke more than those whose girls/boys friends do not smoke.

TABLE 19

Relationship between the smoking habits of students and that of their girlfriend

SMOKING	Girlfriend Smoking: YES	NO	NR	TOTAL
YES	7	13	4	24
NO	13	398	51	462
NR	1	13	10	22
TOTAL	21	424	65	510

Calculated X^2 = 134.09

DF = 4

$p < .01$.

CHAPTER 5

DISCUSSION

Although the differences in the proportion of boys to girls (56.5% 43.5%) in the study population in cooperatively small, the result of the investigation showed that far more boys (79.2%) smoked than girls (20.8%) among the current smokers in the secondary schools studied in Ibadan. The result agrees very closely with Elegbeleye and Fomi-Pearse (1976) who obtained 72.4% and 22.2% respectively among Lagos University Students. Similarly, the findings that more males smoked than females among the students as well as among their parents,agrees with previous reports (Arya and Bennett 1971, Bard and Peacock 1976, Elegbeleye and Fomi Pearse 1974 and Schonland and Bradshaw 1969).

It would appear that some of the smokers (current and ex) in the study population started smoking in their last year in the primary school (Table 3) but thee the percentage of smokers who started smoking dropped in the first two years of their secondary school career reached a peak in forms three and four and then dropped in forms five. This phenomenon is difficult

to explain but it is perhaps not inconceivable that students tend to develop some measures of confidence in themselves, either for good or for bad, as they move to the senior class at the various tiers of our educational systems.

In the early years, thefear of unknown, fear of being caught and disciplined and possibly dismissed or suspended may be deterring the exhibition of the behaviour pattern under study. The drop in the percentage in form five may possibly be explained in the same way. The risk is apparently too high for any imagined pleasure that any student might think of; hence, the caution and the apparent drop in the percentage of smokers. Whatever the reason, the drop at this point, does not seem to support excuse of smokers that they smoke in order to concentrate. If it were true that smoking enhances concentration, a high percentage of smokers would be expected since, academically, this is the most serious year in the secondary school.

It has been shown that the risk of developing health related diseases of smoking especially lung cancer is directly related, among other things, to the total lifetime number of cigarettes smoked and the depth of inhalation(US DHEW 1973). In this study over 70% of the smokers smoked between 1 - 5 sticks a day

(Table 5) and only 16.7% (Table 6) inhale the smoke very deeply. This result shows that majority of the smokers may be beginners who are probably still far away from a state of habituation. This contention is supported by the fact that they take to the habit mostly when they are in company of friends or in social parties (Table 9). Habituated smokers would probably smoke whenever they feel the urge to do so which should be more frequent than occasional. Although all symptoms of diseases associated with smoking were not uncommon among the study population (Table 10), the incidence of nervousness and fast pulse which are presumably common among habituated smokers, was still comparatively low. Infact coughing and sorethroat which again are usually experienced by beginners were the most common.

Table 11 shows that the study population was aware of smoking as a health hazard but it appears that their knowledge of such hazard was relatively poor and probably intuitive because of the nature of the questionnaire. Apart from lung cancer which 85.1% of the respondents associated with smoking, all other diseases were very poorly associated with smoking. That they tend to be knowledgeable about cancer is probably not surprising because this disease has been given much publicity in various mass media and the response to the question

in this may well be a matter of guess work.

A number of factors have been suggested and implicated as motivating the smoking habit in teenagers. Studies have demonstrated that the chance of youngsters smoking is low if their parents do not smoke (Roger 1977). Put in another way, if parents smoke, their children are likely to smoke. The implication of this is that example is the prime motivator. The findings in this study did not support this contention. There was no significant association between the smoking habit of the students and that of their parents (Tables 14 & 15). Nicotine is known to elevate the blood sugar level (Rogers 1977) and each cigarette is likely to be a boost. Thus when both parents smoke it may be they lack a common thing in their body, chemistry and their offspring may likely inherit such deficiency hence a possible association between smoking habit of parent and that of their offspring.

It is generally believed that children from broken homes and those from homes in which one or the other of the parents is dead are likely to be emotionally unstable and sometimes under stress. It has been suggested by many smokers that the habit helps to suppress emotions and stresses of daily life. Again the findings here are at variance with this contention in that less than 1% of the smokers and ex-smokers in this study came from such broken homes.

If we regard smoking as an undesirable habit, which it is, the findings in this study showed that religion has little or no influence on the smoking habit of our teenagers (Table 16). However there was a significant association ($\alpha > P > .01$) between the sex of smokers and their smoking habit (Table 17). Boys smoked significantly more than girls and this is probably because males are characteristically more adventurous and daring than females. But there is evidence from other workers that the females are fast catching up with men in the habit (Hanley 1976).

In as much as over 60% of the smokers in this study believed that friends influenced, in a positive way, their smoking habit (Table 9) it is quite obvious that peer group effect is the predominant motivating factor in the smoking habit of the study population. Considering the age structure of the

study population, it is quite natural that peer effect will play a vital role. It is equally important to recall the majority of the smokers were from what can be regarded as elitist or upper class schools - Queen's School, Government College and International School - containing students of the upper socio-economic class, parentage. These were teenagers in transition whose homes were equipped with modern electronics, mass media gadgets, and whose parents were caught up between freedom of behaviour for the kids and the traditional conservative discipline. Under this kind of atmosphere, peer influence is most likely to influence any habit, whether good or bad, picked up by the children especially when such habit is further encouraged by deceptive advertisement from the mass media. With this kind of population, the kind of advertisement in the mass media which portrays cigarette smoking as trendy, manly and fashionable, it cannot but influence the attitude of teenagers to such advertised habit. Table 4 in which newspaper, magazine and radio advertisement accounted for over 67% of the influence factor agrees with this contention.

Health Education Implication

This study has been unable to show that cigarette smoking is common among the secondary school pupils.

From the 20.2% who were past and current smokers it was found that the strongest factor which influenced their smoking habit is peer group. This habit was usually practised when they were together i.e. at social parties. There are some other factors such as advertisements and adult smoking habit that also influenced the smoking habits of pupils. The study did not reflect the fact that the smoking habit of parents was associated with the smoking habits of pupils. This might be because the pupils did not want to implicate their parents.

There is need for an educational programme for the pupils on the implication of cigarette smoking. This must be a comprehensive programme geared towards educating the public at large. This will have to extend to the society at large. This means that everybody connected with these pupils should be involved.

The following health education approaches are recommended for the prevention and cessation of tigarette smoking among the youth. Some of these had been recommended by WHO experts.

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The following health education approaches are recommended for the prevention and cessation of cigarette smoking among the youth. Some of these had been recommended by WHO experts.

1. Organised health education programme for pupils
2. Organized health education programme for teachers
3. Seeking the cooperation of all health workers
4. Restriction of advertisement in the mass media including magazines.
5. Involving as many organizations as possible in the education of youths.

In educating the pupils on the risk of cigarette smoking, this should be part of the school curriculum. In this case the Ministry of Education will be involved, so that when planning the school syllabus, the teaching of the hazard and risk involved in cigarettes smoking will be emphasised, not only in health education but also most of the school subjects especially biology, Physical education, general science, social studies and so on. Teachers should be taught the implications of cigarette smoking during their course of training. Also a crash programme should be arranged for those who are already in the service. They will then be in the position to lecture pupils on this subject. Teachers should also abstain from cigarette smoking because they are the closest to these pupils, who can easily imitate them. The same thing goes for parents. They should not smoke in

the presence of their young ones, if at all they have to smoke. It is better for them not to smoke at all.

With the cooperation of health workers especially because of their accessibility to the public, cigarette smokers can be discouraged and non-smokers can be prevented from smoking. This can also be formalized under programmes such as health talks in the school health clinics, health campaigns or health rallies for school children.

Lastly, different organisations should be involved in educating the youths on the risks involved in cigarette smoking. Organizations such as the scout movement, Boys and Girls Brigades, Red Cross and so on, should be encouraged to give lectures and show films on the hazards of smoking and involved athletic and recreational activities.

With all these precautions our youths would know more about cigarette smoking and its effects. It is then that we can discourage non-smokers from adopting the habit. We can then also hope that some of those who are already smoking will stop.

Limitations of the Study

1. The result presented in this study especially that concerning the parentage of current smokers should probably be taken with caution. In spite of the anonimity and the promise of confidentiality given to students in the course of administering the questionnaire, it was quite obvious, through comments passed by students, that some respondents were holding back some relevant information. For example, 20.2% admitted of having smoked before but only 4.7% admitted that they were current smokers. It is therefore possible that the true percentage of smokers may have been under-mentioned. Since the students were usually punished, including being suspended from schools when caught smoking, they would not be truthful in answering some of the questions.

2. The small value of (N) must have affected the rate of association relating to the hypothesis as the distribution of (n) in the cells affect the value χ^2.

3. Due to the time limit, it was impossible to be closer to the students so as to get familiarised with them, and so make them have greater confidence in the author. It was also the time factor that prevented the author from attending the social functions organised by students and to include more schools in the sample. In other words, the findings of study could have been enriched through participant observations.

4. Timing of the survey was also against the researcher. The survey was carried out when the students had just finished their terminal examinations. At this time it was usually difficult to get all the students together in their classes. Majority of them were all around the campus and even most of them did not come to school.

SUMMARY AND CONCLUSION

Cigarette smoking as an important public health problem among secondary school students in Ibadan was investigated. A total of 510 students of class IV and V from eight random selected schools in Ibadan Municipal Government Area were interviewed by self administering precoded, and pretested questionnaires. The ratio of girls to boys was 1:1.3 and christians to muslims were in the approximate ratio of 3:1.

The analysis of the result showed that 20.2% of the respondents have smoked in the past while only 4.7% were current smokers. Of the current smokers, 70.2% were boys and 29.8% were girls.

Only 10.9% of the respondents come from what can be regarded as broken homes and of these, less than 1% smoked.

Majority of the smokers smoked between 1-6 sticks a day and non took over 10 sticks per day. The smokers were mostly beginners and over 80% did not inhale or only did so moderately.

All the symptoms of health-related diseases of smoking seemed to have been experienced by the smokers but sore-throat and cough were the commonest.

The smokers seemed to be knowledgeable about the association between cigarette smoking and cancer, but their knowledge of other diseases associated with smoking is very poor.

The more important motivating factors were peer-group effect as opposed to mass media propaganda.

It can be concluded that the smokers in the study population were beginners and not yet habituated. Their rate of smoking was still relatively low but their knowledge of health hazard of smoking was far from being adequate. The hypothesis that there is no significant association between the smoking habit of students and their parents was accepted so also is the hypothesis of no significant association between smoking habit of students and their religion affiliation. But there was a significant association between the smoking habit of the pupil and their sexes (Table 18 and 19) and also between the smoking habit of students and their friends.

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APPENDIX A

DEPARTMENT OF PREVENTIVE AND SOCIAL MEDICINE.
UNIVERSITY OF IBADAN

A STUDY OF FACTORS INFLUENCING CIGARETTE SMOKING HABIT AMONG SECONDARY SCHOOL PUPILS IN IBADAN

(1) CLASS

(1) ONE
(2) TWO
(3) THREE
(4) FOUR
(5) FIVE

(2) SEX

(1) MALE
(2) FEMALE

(3) RELIGION

(1) CHRISTIAN
(2) MOSLEM
(3) OTHERS

(4) DO THE FOLLOWING SMOKE CIGARETTE?

(1) FATHER (1) YES (2) NO
(2) MOTHER (1) YES (2) NO
(3) BOYFRIEND (1) YES (2) NO
(4) GIRLFRIEND (1) YES (2) NO
(5) ROOMATE IN HOSTEL (1) YES NO

(5) (a) HAVE YOU EVER SMOKED CIGARETTE IN THE PAST?

(1) YES
(2) NO

(b) ON WHAT OCCASIONS HAVE YOU EVER SMOKED CIGARETTE

(1) IN A SOCIAL PARTY (1) YES ☐ (2) NO ☐
(2) IN A COMPANY OF FRIEND (1) YES ☐ (2) NO ☐
(3) WHEN IN THE TOILET (1) YES ☐ (2) NO ☐
(4) AFTER MEAL (1) YES ☐ (2) NO ☐

(6) DO YOU NOW SMOKE CIGARETTE? (1) YES ☐ (2) NO ☐

IF "NO" GO TO QUESTION 15; IF YES GO AHEAD AND ANSWER ALL QUESTIONS.

(7) HOW OLD WERE YOU AND IN WHAT CLASS WERE YOU WHEN YOU STARTED SMOKING?

AGE ☐☐
CLASS ☐

(8) HOW MANY STICKS OF CIGARETTE DO YOU NOW SMOKE

PER DAY ☐☐
PER WEEK ☐☐☐

(9) WHEN YOU SMOKE TO WHAT EXTENT DO YOU INHALE THE SMOKE

(1) NOT AT ALL ☐
(2) MODERATELY ☐
(3) DEEPLY ☐

(10) WHY DO YOU SMOKE CIGARETTES?

(a) TO CONCENTRATE (1) YES ☐ NO ☐
(b) TO REDUCE ANXIETY AND NERVOUSNESS (1) YES ☐ (2) NO ☐
(c) TO IMPRESS OTHERS (1) YES ☐ (2) NO ☐
(d) TO ENJOY LIFE (1) YES ☐ (2) NO ☐
(e) FUN FUN (1) YES ☐ (2) NO ☐
(f) TO STAY AWAKE (1) YES ☐ (2) NO ☐
(g) FOR ENERGY (1) YES ☐ (2) NO ☐
(h) TO PREVENT NAUSEA (1) YES ☐ (2) NO ☐
(i) TO RELAX (1) YES ☐ (2) NO ☐

(11) IF YOU SMOKE WHO OF THE FOLLOWING PEOPLE DO YOU THINK INFLUENCED YOUR SMOKING HABIT

FATHER YES ☐ NO ☐
MOTHER YES ☐ NO ☐
BOYFRIEND YES ☐ NO ☐
GIRLFRIEND YES ☐ NO ☐
ROOMMATE IN HOSTEL YES ☐ NO ☐

(12) DO YOU THINK THE FOLLOWING HAVE ALSO INFLUENCED YOUR SMOKING HABIT

(a) NEWS PAPER ADVERT (1) YES ☐ (2) NO ☐
(b) MAGAZINES ADVERTISEMENT (1) YES ☐ (2) NO ☐
(c) RADIO ADVERTISEMENT (1) YES ☐ (2) NO ☐
(d) TELEVISION ADVERTISEMENT (1) YES ☐ (2) NO ☐

(13) HAVE YOU EVER TRIED TO STOP SMOKING

(1) YES ☐ (2) NO ☐

HOW MANY TIMES HAVE YOU TRIED? ☐☐

DID YOU EVER SUCCEED IN STOPPING? YES ☐ NO ☐

WHAT WAS THE LONGEST TIME YOU WERE ABLE TO STOP?

(1) Less than 1 month
(2) 1-3 months
(3) 3-6 months
(4) 6-9 months
(5) 9-12 months
(6) 12months and above ☐

WHY DID YOU START SMOKING AGAIN?

(1) Because I cannot concentrate
(2) " I am nervous
(3) " I am rejected by my friends ☐
(4) Others

(14) DO YOU NOW WANT TO STOP SMOKING?

(1) YES ☐ NO ☐

If "yes" why .....

If "no" why .....

(15) HAVE YOU EVER SMOKE CIGARETTE BEFORE BUT HAVE NOW STOPPED? YES ☐ NO ☐

(16) IF YES WHY DID YOU STOP?

(1) BECAUSE MY PARENT DIDN'T LIKE IT
(2) " " BOYFRIEND " " "
(3) " " GIRLFRIEND" " "
(4) " " SCHOOL AUTHORITY DIDN'T LIKE IT
(5) " IT IS NOT GOOD FOR MY HEALTH
(6) " I HAVE NO MONEY TO BUY IT
(7) OTHERS .....
.....

(17) WHICH OF THE FOLLOWING AILMENTS HAVE YOU EXPERIENCED WHEN YOU ARE SMOKING CIGARETTE

(a) COUGH	(1) YES ☐	(2) NO ☐
(b) SORETHROAT	(1) YES ☐	(2) NO ☐
(c) NERVOUSNESS	(1) YES ☐	(2) NO ☐
(d) FAST PULSE	(1) YES ☐	(2) NO ☐
(e) DIZZINESS	(1) YES ☐	(2) NO ☐
(f) COPIOUS SPUTUM IN MOUTH	(1) YES ☐	(2) NO ☐
(g) LACK OF TASTE FOR FOOD	(1) YES ☐	(2) NO ☐
(h) SINUS (NASAL) TROUBLE	(1) YES ☐	(2) NO ☐

(18) WHICH OF THE FOLLOWING AILMENT DO YOU THINK IS ASSOCIATED WITH CIGARETTE SMOKING

(a) LUNG CANCER	(1) YES ☐	(2) NO ☐
(b) HEADACHE	(1) YES ☐	(2) NO ☐
(c) COMMON COLD	(1) YES ☐	(2) NO ☐
(d) EMPHYSEMA	(1) YES ☐	(2) NO ☐
(e) BRONCHITIS	(1) YES ☐	(2) NO ☐
(f) STOMACHACHE	(1) YES ☐	(2) NO ☐
(g) PEPTIC ULCER	(1) YES ☐	(2) NO ☐
(h) HYPERTENSION	(1) YES ☐	(2) NO ☐

(19) REACT TO THE FOLLOWING STATEMENTS

	1 AGREE	2 DISAGREE	3 PARTLY AGREE	4 PARTLY DISAGREE	5 NO OPINION	6	
THE SCHOOL AUTHORITY SHOULD BAN CIGARETTE SMOKING IN SCHOOL							
A TEACHER WHO SMOKES CANNOT BE MORALLY JUSTIFIED IN ASKING HIS PUPILS NOT TO SMOKE							
BOYS MAY SMOKE BUT IT IS NOT APPROPRIATE FOR GIRLS TO SMOKE							
CIGARETTE SMOKING IS ENTIRELY THE SMOKERS BUSINESS AND NOT ANYBODY'S CONCERN							
STUDENTS SHOULD BE ALLOWED TO SMOKE IN THE SCHOOL CAMPUS							
IF MY PARENT SMOKE I SHOULD SMOKE							
SMOKING IS BAD FOR ONES HEALTH							
SMOKING HELPS ONE MAKES NEW FRIENDS							
SMOKING CAUSES HEART DISEASES							
SMOKING HELPS ONE FEEL GROWN UP							
SMOKING MAKES ONE ACCEPTABLE TO FRIENDS							

(20) ARE YOUR PARENTS (1) LIVING TOGETHER (1) YES ☐ (2) NO ☐

(2) SEPERATED (1) YES ☐ (2) NO ☐

(3) DIVORCED (1) YES ☐ (2) NO ☐

(4) FATHER DEAD (1) YES ☐ (2) NO ☐

(5) MOTHER DEAD (1) YES ☐ (2) NO ☐

WHAT IS YOUR FATHER'S OCCUPATION .....

WHAT IS YOUR MOTHER'S OCCUPATION .....

(19) REACT TO THE FOLLOWING STATEMENTS

	1 AGREE	2 DISAGREE	3 PARTLY AGREE	4 MOSTLY DISAGREE	5 NO OPINION	6
THE SCHOOL AUTHORITY SHOULD BAN CIGARETTE SMOKING IN SCHOOL						
A TEACHER WHO SMOKES CANNOT BE MORALLY JUSTIFIED IN ASKING HIS PUPILS NOT TO SMOKE						
BOYS MAY SMOKE BUT IT IS NOT APPROPRIATE FOR GIRLS TO SMOKE						
CIGARETTE SMOKING IS ENTIRELY THE SMOKERS BUSINESS AND NOT ANYBODY'S CONCERN						
STUDENTS SHOULD BE ALLOWED TO SMOKE IN THE SCHOOL CAMPUS						
IF MY PARENT SMOKE I SHOULD SMOKE						
SMOKING IS BAD FOR ONES HEALTH						
SMOKING HELPS ONE MAKES NEW FRIENDS						
SMOKING CAUSED HEART DISEASES						
SMOKING HELPS ONE FEEL GROWN UP						
SMOKING MAKES ONE ACCEPTABLE TO FRIENDS						

(20) ARE YOUR PARENTS (1) LIVING TOGETHER (1) YES (2) NO

(2) SEPERATED (1) YES (2) NO

(3) DIVORCED (1) YES (2) NO

(4) FATHER DEAD (1) YES (2) NO

(5) MOTHER DEAD (1) YES (2) NO

WHAT IS YOUR FATHER'S OCCUPATION .....

WHAT IS YOUR MOTHER'S OCCUPATION .....

Doctor	)
Lawyer	)
Lecturer	)
Senior Civil Servant	) 1
Accountant	)
Administrator	)
Engineer	)
	)
Nurse	)
Graduate Officer in the government/company	)
Secretary	) 2
Business/Trading	)
Pensioner	)
	)
Typist	)
Labourer	)
Bricklayer	) 3
Petty Trading/Business	)
	)
Farmer	)
Unemployed	) 4
Housewife	)

APPENDIX B

CLASSIFICATION OF SECONDARY SCHOOLS IN IBADAN CITY ACCORDING TO THEIR PROPRIETORSHIP AND SUGGESTED SOCIO-ECONOMIC STATUS OF PARENTS

Affiliation Based On Original Ownership	Number of Schools	Middle Class Percentage	Low Class Percentage
Government Proprietorship	2(2)	GC GS *(2)	
Christian Proprietorship	22 (2)	GS, SA, ACG, ASC, BG, BP, MT, MO, CA, IBH, MH, (1), SP, YC, OL, SL, MG, ST, OA, LC.	BI, PG, CAA (1)
Muslim Proprietorship	3(2)	AH (1)	IS, IH (1).
Private Proprietorship	11(2)	AG, AM, EH, AC, OE, MH, (1)	IC, OE, UB, UBO (1) OGH.
TOTAL	38(8)	28 (9)	10 (3)

* See Appendix I for the Interpretations of abbreviations.

( ) Number of School included in the Sample.

APPENDIX C

SECONDARY SCHOOLS SELECTED FOR THE INVESTIGATION.

Name of Schools	Type of School	
Anglican Secondary Orita Mefa	Mixed	
Ibadan Boys High School Oke-Bola		Boys' only
Mount Olivet Grammar School Ibadan	Mixed	
Okubadan High School		Boys' only
Ahmadiyya Grammar School	Mixed	
Inshntudoon Grammar School		Girls' only
Government College		Boys' only
Queen's School		Girls' only
International School	Mixed	

Above shows the following groups of Selected Schools according to their affiliation based on their original ownership:-

- Government Proprietorship - 2 schools
- Christian Proprietorship - 2 schools
- Muslim Proprietorship - 2 schools
- Private Proprietorship - 2 schools

APPENDIX D

LIST OF SECONDARY SCHOOLS IN IBADAN MUNICIPAL GOVERNMENT AREA

1979/80

Serial No.	Name of School	Abbreviation used for schools	Sex of Students
1.	Abadina College, U.I, Ibadan	AC	Mixed
2.	Adekilo Goodwill Grammar School, Ibadan	AG	Mixed
3.	Adelagun Memorial Grammar School, Ibadan	AM	Mixed
4.	African Church Grammar School. Ibadan	ACG	Mixed
5.	Ahmadiyya Grammar School, Ibadan	AH	Mixed
6.	Anglican Secondary Commercial School, Ibadan	ASC	Mixed
7.	Baptist Grammar School, Ibadan	BG	Mixed
8.	Bishop Phillips Academy, Ibadan	BP	Mixed
9.	C. A. C. Grammar School, Ibadan	CA	Mixed
10.	Eyinni High School, Ibadan	EH	Mixed
11.	Government College, Ibadan	GC	Boys only
12.	Holy Trinity Grammar School, Ibadan	HT	Mixed
13.	Ibadan Boys' High School, Ibadan	IBH	Boys only
14.	Ibadan City Academy, Ibadan	IC	Mixed
15.	Ibadan Grammar School, Ibadan	IG	Mixed
16.	Iesbatud en Grammar School, Ibadan	IS	Girls only
17.	Islamic High School, Ibadan	IH	Mixed
18.	Lakelu Grammar School, Ibadan	LG	Boys only
19.	Loyola College, Ibadan	L	Boys only
20.	Methodist Grammar School, Bodija, Ibadan	MG	Mixed
21.	Methodist High School, Express Road, Ibadan	MH	Mixed
22.	Mount Olivet Grammar School, Ibadan	MO	Mixed
23.	Okebadan High School, Ibadan	OK	Boys only
24.	Oluyole Grammar School, Ibadan	OG	Mixed
25.	Our Lady of Apostles, Mapoway, Ibadan	OL	Girls only
26.	People's Girls' Grammar School, Ibadan	PG	Girls only
27.	Queen of Apostles, Oluforo, Ibadan	QA	Girls only
28.	Queen's School, Ibadan	QS	Girls only
29.	Renascent High School, Ibadan	RS	Mixed
30.	St. Anne's School, Ibadan	SA	Girls only
31.	St. Louis Girls' Grammar School, Ibadan	SL	Girls only
32.	St. Patrick's Grammar School, Ibadan	SP	Boys only
33.	St. Teresa's College, Ibadan	ST	Girls only
34.	Yejide Girls' Grammar School, Ibadan	YG	Girls only
35.	Urban Day Secondary School, Challenge, Ibadan	UDS	Mixed
36.	Urban Day Secondary School, Oke-Bola, Ibadan	UDS	Mixed
37.	C. A. C. Grammar School, Anlugbua, Ibadan	CAC	Mixed
38.	Olubadan High School, Aperin, Ibadan	OIB	Mixed