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Prevalence and patterns of tobacco use among woman in Benin city, Nigeria

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DECLARATION

I, Ogheneruemu Vincent, Okwuolise, declare that this research report is my own work. It is being submitted for the degree of Master of Public Health of the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at this or any other University.

……

…….day of …..……., 2005

DEDICATION

To my mother, **Mrs. Okwuolise Abusheli** who saw education as the best bequest a child needs.

ABSTRACT

Background: Tobacco use is one of the single biggest causes of preventable deaths and is increasingly affecting developing countries and men and women alike. Tobacco use is historically more common in men but is becoming more common among women. In the absence of population-based health information in many dev eloping countries and sub-Saharan Africa in particular, public health planning and priority setting is in disarray. *M*ost of the prevalence studies on tobacco have concentrated on smoked tobacco and men in particular. This cross-sectional study design looked at the prevalence, patterns and determinants of tobacco use among women in Benin City, an urban area in Nigeria.

Methods: 491 face-to-face interviews were conducted in 45 enumeration areas randomly sampled in Oredo LGA in Benin City, Nigeria. Twelve households were randomly sampled in each EA and eligible woman over the age of 18 years was identified in each household.

Results: The prevalence of tobacco use was 8.8% comprising of smoking (3.3%) and smokeless (5.5%) initiation occur during the teenage years mostly. Smoking cigarettes was more common among the younger, more educated women and *Tabba* (a mixture of powdered dry tobacco leaf and sodium bicarbonate) used mostly by older less educated women (RR = 3.10, CI = 1.01 - 9.48). The participants perceived friends using tobacco as a reason for their starting to use tobacco. Determinants of tobacco use were education, exposure to tobacco advertising and / or promotions which occurs almost unrestricted despite some tobacco control legislations.

Conclusions: The findings suggest that tobacco use is going on unhindered and unless something is done to curtail the activities of the tobacco industry, a major public health catastrophe is looming.

ACKNOWLEDGEMENT

Surveys of this nature undertaken a distant place where the necessary infrastructures are poorly developed can only succeed through concerted effort from many individuals. As principal researcher, it is with great pleasure that I acknowledge these wonderful people.

Foremost are my Supervisor, Nicola Christofides whose incisive contributions have supported this work throughout, and Women's Health Project (WHP) that funded the survey with assistance from the Swedish International Development Agency (SIDA). This research forms part of a larger project that aims to understand tobacco use among women and tobacco control challenges in Africa.

Many thanks to the Staff of School of Public Health, WITS University for providing an enabling environment to acquire the necessary skills, and Sharon Fonn and Shan Naidoo for their comments on the research protocol.

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Recognition is also due to my best friend and wife Efe, my family members, cousin, 'GP' and friends too numerous to mention for their prayers, encouragement and hanging-on throughout the entire period. Most importantly, I express my heartfelt gratitude to *El*

Todopoderoso; the all powerful God for without Him, all of these would not have come to pass. To Him are all honours, glory and praise.

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1.0 INTRODUCTION

1.1 Background

Tobacco was introduced into Africa by the Turks who brought it into Egypt in the 16th century [1]. Tobacco is also a native plant of the America and there is evidence indicating the use of tobacco from pre-historic times [2]. The danger of tobacco use is recognized and well documented for practically all living creature, including man, and should be avoided, yet this weed has been able to conceal it's poison so that millions of men, and women alike are made to believe that it is harmless [3]. Tobacco use whether smoked or smokeless has continued, with increasing number of people in the developing countries taking up tobacco, and raises serious public health concerns.

1.2 Prevalence of tobacco use

Currently the World Health Organization (WHO) estimates that 1.1 billion people, a third of the world's population above the age of 15years use tobacco in various forms. Of these smokers, 800 million live in the developing world comprising of 700 million males and 100 million females [2, 4, 5]. The WHO projections for the 1990s gave estimates of the proportion of smokers as 12% among women, however it is much higher in the Americas and Europe (>20%), where for example, in Brazil, Denmark and Norway as much as 30% of women smoke [6, 7]. About 10% of women in developing countries smoke with other forms of smokeless tobacco being used in different countries. It is believed to be rising particularly in the developing countries owing to the aggressive marketing strategies [7].

1.3 Tobacco related mortality

It is a major cause of preventable mortality accounting for three million deaths annually especially in the developed world where about half a million deaths occur among women [5]. Already tobacco is associated with one in every nine deaths in South Africa and projected to cause 10 million deaths per year by 2025 worldwide [8].

1.4 Pattern of tobacco use

The patterns of tobacco use for both men and women are practically the same across the developing countries. Historical, anthropological and contemporary data for Western and non-Western societies show that in most cultures, tobacco use has been more common in men than women [9]. However, we see that in developed countries this trend has changed, and smoking rates are similar for both sexes, for example in Sweden, the 1998 statistics shows more women (22.3%) smoke compared to men (17.1%) [6].

1.5 Forms of tobacco use

Tobacco is used in different forms, either smoked (cigarettes) or smokeless (snuff used orally or instilled through the nostrils, chewing tobacco and water pipe tobacco [4, 8, 10, 11, 12]. Snuff is powdered air and fire cured tobacco leaves mixed with sodium bicarbonate. The oral form of tobacco (snuff) is called differently in different parts of the world: *Tabba* in Nigeria, *Toombak* in Sudan [10].

1.6 Gender differences in tobacco use

Gender issues are institutionally structured and define roles and responsibilities for men and women. In most cultures, tobacco use has been commoner among men than women [3, 7, 9, 13]. Kaplan et al [3] proposed three hypotheses why more men use tobacco compared to women. Firstly, due to inherent sex differences in tobacco metabolism, females tend to fall sick the more at first tobacco use, and consequently less likely to adopt the habit. Secondly, the effect of Westernisation thought to have contributed to increased differences in tobacco use between sexes. Men were better exposed to the effects of westernization at the turn of colonization by the west. The third hypothesis is gender roles and norms, which tend to put more power and scarce resources at the disposal of the male folks. In such cultures, there are greater restrictions on women such as social pressures against women smoking. The restrictions that prevented women from smoking are not the same for smokeless tobacco which tends to be more socially acceptable [9, 18].

These social restrictions have greatly reduced tobacco use by women and these gender differences in tobacco use vary in magnitude, patterns of tobacco use and particular cultural group, age group and the historical context being considered [13]. For a tobacco control programme to be more successful therefore, a gender perspective needs to be added to tobacco control policies as this will contribute to more accurate epidemiological understanding of tobacco use.

Based on observations over a period of one century, Lopez (et al) [15], proposed a four-stage model of the tobacco consumption epidemic. The model reflects the current WHO

paradigm for understanding patterns of smoking and smoking related deaths in developed countries, with the four stages in the model as part of a continuum. The model is the same for men and women only it usually starts with men so that by the time men are in stage 2 or 3, women are still in stage1.

- Stage 1: is the starting point of the tobacco epidemic with less than 15% prevalence in men and fewer numbers of women smoking. This stage is usually brief with male smokers increasing towards the end of this stage and tobacco related deaths are not yet visible. This is the stage of the epidemic in most developing countries in Africa with the more literate women having more resources smoking.
- Stage 2: lasts a little longer than the first. There is a rapid rise in male cigarette consumption with the women lagging behind but increasing rapidly also. Tobacco related deaths start occurring with very few deaths among women.
- Stage 3: tobacco consumption peaks around 60% at this stage and remains static for a while thereafter male smokers begin to decline to about 40% towards the end of the phase. Educated middle age and older people are first to cease from smoking. There is a sharp increase in tobacco related deaths for both sexes during this period.
- Smoking prevalence for both men and women declines with a slower decline noted among women. Tobacco related deaths peaks at this phase with more deaths occurring in men.

1.7 Health consequences of tobacco use

Tobacco use is one of the main preventable causes of morbidity and mortality in the world [3, 4, 16, 17]. The health consequences of tobacco use whether smoking or smokeless takes decades to manifest. On the one hand, the smoker rapidly becomes addicted and often underestimated the addictive nature of tobacco and on the other hand it causes fatal and disabling diseases [2, 5, 18, 19].

Due to the long latency period before the health consequences of tobacco use in a population become apparent, the known effects on women are those of studies carried out in the developed world, where women began smoking decades ago and have had adequate time to monitor the consequences. The health consequences of tobacco use among women are summarized below [7, 10, 19]. Women who smoke are at increased risk of:

- Primary and secondary infertility
- Delay in conception
- Adverse pregnancy outcomes such as:

    Premature rupture of membranes

    Abruptio placentae

    Placenta previa

    Preterm delivery

    Low birth weight infants

    Small for gestational age infants

    Still born infants

    Early neonatal infant deaths

- Cardiovascular diseases, including

  Coronary heart disease

  Ischemic stroke

  Subarachnoid hemorrhage

- Cancers, including

  Lung, oesophagus, mouth and pharynx, bladder, pancreas, kidney cervix of uterus.

- Chronic obstructive pulmonary diseases, including

  Bronchitis and emphysema

- Hip fracture

1.8 Knowledge, attitude and belief about tobacco use

The way tobacco is seen by women has a lot of influence on the use. Women why trying to secure a civil and political equality with men desire to enter into activities hitherto classified as masculine. Socio-cultural beliefs about tobacco use (smoking) were being confined to street women, actresses and women of the 'smart set' [3], and smokeless tobacco a habit of the poor, older woman with low education [2, 7, 14, 18] leaves a lot of doubts. According to Ernster, et al [7], tobacco has been identified as a contributing factor to gender inequity and undermines the principle of women and children's right to health as a basic human right. The 'tobacco industry' has tried to segment the female market on the basis of current values, age and lifestyles. This, the industry does by using photographs of women like the Chesterfield's advert of 1926, of a woman asking a male smoker to "Blow Some My Way" and the Lucky Strike's of 1928 campaign to get

women to “Reach for a Lucky Strike instead of a Sweet” linking smoking with slimness [7].

Women may use tobacco as a sign of equality with men, for the perceived calming effects, relief of headaches, toothaches and worries. Cigarettes specifically are perceived to aid in controlling weight [3, 19, 20]. Also tobacco use may have been influenced by the limited knowledge of the associated health hazards at the time [2, 21, 23, 24].

Whereas the harmful consequences of smoking are well documented, little is said about the ability of smokeless tobacco to cause harm. Many tobacco users do not know that even in the short term, smokeless tobacco is a dangerous alternative to cigarettes [1, 22, 25]. Women’s knowledge about tobacco use in the developing countries is limited due to barriers to accessing scarce information resulting from widespread rural dwellings, low literacy levels and tendency to remain at home [4, 9, 10, 12, 13, 19, 26].

1.9 Determinants of tobacco use

1.9.1 Age of onset

Generally, onset of tobacco use is in early teens with a mean age of onset of 15 years. Few start before age ten and a fewer number start tobacco use later than their twentieth birthday [4, 11, 19, 20, 22, 26, 27, 28, 29, 30, 31, 32, 33]. All things being equal, initiation of tobacco use occur in adolescence, typically the same in both sexes between ages 16 and 18, with almost every first smoke before college [2, 5, 10, 17, 27]. It is reported that subsequent tobacco use is a resultant effect of experimentation with tobacco that led to addiction [3, 19, 27].

1.9.2 Initiation of tobacco use

Typically, initiation of tobacco use begins early [27] and affected by a number of factors. Interplay of both negative and positive environmental and personal factors differing between countries and between socio-cultural groups influence initiation of tobacco use.

Demographic factors such as age, gender, ethnicity, family size and structure and parental socio-economic status influence tobacco use. People who began using tobacco at a younger age have being shown by studies to be more likely to becoming regular tobacco users and less likely to quit. Women in developed countries tend to have a higher level of tobacco use when compared to developing countries. Women of colour have also been shown to have lower levels of initiation and current tobacco use than their white counterparts in developed countries [8, 16, 18, 20, 24, 27, 30].

1.9.3 Parental influence

The impact of parental tobacco use on their children is varied. Children of parents who use tobacco perceive it as an acceptable habit and are more at risk of experimenting with tobacco. Being raised in a home where parents smoke, exposes a young person to cigarette smoke and such a one may get accustomed to cigarette smoke. Parents who smoke may give children easier access to cigarettes, and less likely to oppose their children smoking habit once started [24, 27, 30].

1.9.4 Peer influence

Peers have been defined in various ways but one notable one is the Oxford English dictionary as one who is the equal of another in rank, merit, age, etc. This will include classmates, friends whether same sex or opposite sex, and colleagues at work. Smoking is usually a shared activity with important socializing functions for youth. The onset of tobacco use has been related to having a close friend who uses tobacco. The single most direct influence on adolescent tobacco use is how many of their friends use tobacco. Social reinforcement tends to predict continued tobacco use among young people who already have begun tobacco use [10, 17, 20, 22, 24, 27 29, 30, 31, 35].

1.9.5 Advertising, Promotions and Sponsorship

Contrary to the rising trend in tobacco consumption in developing countries, there has been a steady decline in the number of smokers (tobacco users) as well as the amount of tobacco used by each individual in most of the developed world [2, 4, 5, 24, 27]. It is therefore imperative to ask why people use tobacco in the developing world, and specifically why are women starting to use tobacco now more than before in developing countries. An understanding of this may assist in preventing the tobacco epidemic from occurring in a larger scale.

Through marketing promotions and sponsorships, the 'tobacco industry' has created a consumer culture that "holds out the promise of a beautiful and fulfilling life: the achievement of individuality through the transformation of self and lifestyle", a promise

of participation in a fantasy world that tobacco can do for you what you cannot yourself [1, 32, 36].

This rising trend may not be unconnected with the aggressive advertising by the multinational tobacco industry to persuade women and young people to smoke in order to be emancipated and modern [27, 32, 37]. Rather than empowering them to find their own voice, the industry seeks to ensnare them into dependency. The industry has been adept at finding new ways to publicise their product and circumventing bans and restrictions where they exist. Such indirect advertising methods include sponsorship (sports, musical concerts), promotional items and souvenirs, brand stretching, samples and other forms of entertainment popular with young people [17, 22, 37, 39].

This association of tobacco with success and freedom has inoculated the mind of the public with the idea that smoking gives an invitation to participate in a world of fantasy: achievement of individuality through the transformation of self and lifestyle, sophisticated, trendy women with men – a sign of "gender equality" [7, 22, 27, 36]

1.10 Rationale for the study

As it is in other parts of the developing world and Africa in particular, there is a dearth of data and information on health and health related issues, an indication of the level of underdevelopment. Specifically for tobacco use in the developing countries, most published work is hospital based [4, 10, 16], and figures quoted in literature lately are projections from past studies or estimates. This may not give a true picture of the prevalence and patterns of tobacco use. A previous study puts the prevalence of cigarette

smoking among Nigerian women at 10% [5] and a more recent World Bank's figure is 1.7% [7]. This study will therefore not only contribute to local knowledge of the prevalence and patterns of smoking but will also look at smokeless tobacco use as well as predictors / determinants of tobacco use in Benin City, Nigeria. Better understanding of these factors will provide data for the advocacy to improve tobacco control and the development of gender sensitive programmes to prevent women from using tobacco and curbing this growing trend. We have an opportunity to prevent an epidemic.

Nigeria is a federal state and key issues can be legislated upon, at the federal, state, or a combination of both federal and state legislature levels. Due to the fact that data are not readily available, compounded by inadequate research done on women issues, a knowledge of the extent of tobacco use among women, will go a long way to inform policy makers to formulate gender sensitive policies aimed at protecting specifically women and children, from this tobacco epidemic ingeniously engineered by the tobacco companies [3, 40].

Benin City, the site for the study and capital of Edo State is comprised of three local government areas (LGA). Oredo LGA, one of these three has the upmarket residential area known as GRA (Government Reserved Area) inhabited by the very affluent of the society, and areas inhabited by the medium and low-income earners. Traditionally, the inhabitants were farmers but with colonization and westernisation which led to the pursuit of a modern day urban lifestyle, farming has been replaced by white-and-blue collar jobs. There are twelve political wards (1999 Electoral Wards) and a female

population of 178,814 living in 78,625 households (National Population Commission (NPC); 1991).

1.11 Overall aim of the study

The aim of this study is to determine the prevalence and patterns of tobacco use (smoking and smokeless) among adult females at the household level in Benin City.

1.12 Objectives:

To investigate among women:

- To determine prevalence of tobacco use among women of Benin City, Nigeria;
- To describe patterns of tobacco use including forms of tobacco used and how much is used;
- To describe socio-demographic characteristics of tobacco users and non users;
- To describe age of first tobacco use;
- To describe factors initiating and maintaining the use of tobacco including individual and social factors and exposure to marketing;
- To explore knowledge of health risks / consequences of using tobacco, attitudes and beliefs about tobacco use;
- To determine whether there are associations between tobacco use and socio-demographic variables, exposure to marketing, knowledge, attitudes and beliefs.

2.0 METHODOLOGY

2.1 Site of the study

Benin City, once a powerful city-state, exists today as a modern African city in now south central Nigeria. In the past, it was an inland port on the Benin River, and is the capital of Edo state. Traditionally, it is ruled by the Obas, a dynasty traced by the present day Oba from A.D. 1300. Geo-politically, Benin City is the seat of the state's and three (3) local governments, namely Egor, Ikpoba-Oha and Oredo. Also in Benin City are the two campuses of the University of Benin (the youngest of the first generation universities in Nigeria) and the Benin Museum. Oredo local government area, the oldest of the three local government areas in Benin City was selected for the survey on the basis of the fact that it is representative, comprised of the ancient and the modern in terms of development.

2.2 Study design

The study was a cross-sectional analytic study. Data collection was done by way of interviews using standardized structured questionnaires (appendix B1) comprising of mainly closed ended with a few open ended questions. Interviews were conducted in the local languages.

2.3 Study population

The study was carried out in Benin City, Edo State of Nigeria (see appendix C1). It is an urban location with a population of 359,973 people with women being 178,814 (49.67%) and men 181,159 (50.33%) of the population (Census 1991). The natives (B*enis*) speak *Edo* language

though the most spoken language is *Pigeon English*. Only adult women 18 years and above were included for the study.

2.4 Sampling technique

Firstly, a sample size calculation was done. There were 78,625 households (NPC; 1991 census). The 1991 is the most recent census in Nigeria as there has been no census exercise thereafter whether national or regional. This may not be unconnected with the prolong military rule that impacted on the whole geo-political system. Assuming a prevalence of tobacco use of 5% in the population, a sample size of four hundred and sixty-two was calculated. The study sample was designed so as to allow for generalizabilty of findings to all adult women of Benin City

A multi-staged random sampling method was used:

- The first stage was the random sampling the forty-five (45) enumeration areas (EA) from a total of 1239 enumeration areas (see appendix C2 for sketch map).
- The second stage of the sampling was to identify households from these enumeration areas by simple random method. Twelve (12) households were thus selected at the second stage from each EA. First a mapping of the area was carried out and each house was allocated a number (see appendix C3), and then the twelve households were randomly selected.
- Thirdly, one eligible participant per household for the interview was randomly identified (appendix C4).

2.5 Inclusion / Exclusion criteria

One female participant, 18 years of age or older that sleeps at least four nights a week in the household was selected. Where there was more than one eligible participant within a household, the one interviewee was randomly selected.

Females younger than 18 years of age and those 18 years and above but not at home at the time of the study, as well as all males were excluded from the study. Maximum of two visits were made to each sampled household to interview an eligible participant.

2.6 Replacement criteria

1. Where an eligible female participant 18 years or above living in the household could not be located after two visits, the household was substituted by the closest household to the right.

2. Where there was no female 18 years and above or a permanent resident that was willing to participate, the household was substituted by the closest household to the right.

3. Where the selected participant could not speak any of the three most spoken languages and an interpreter was not found, such a participant was replaced by randomly selecting another as stated above

2.7 Questionnaire development

The questionnaire for the survey drew on items from a standardized WHO instrument designed to measure tobacco use. I also drew on items to capture exposure to marketing from CDC Global

Youth Tobacco Survey [41] adapted to the local situation. The same questionnaire was used for every participant interviewed. The questions were mainly closed with a few open ended.

The questionnaire was translated to the other two commonly spoken languages i.e. *Edo* (a paid school teacher translated) and *Pigeon English* (translated by the principal researcher), and checked by the field workers. The questionnaire (see appendix B) attempted to measure a range of factors judged to play vital roles in the use/non-use of tobacco and these include:

- Socio-demographic information such as age, marital status, education, employment status, etc.
- Knowledge and awareness about tobacco.
- Practices relating to tobacco.
- Exposure to mainstream media and other forms of advertising.
- Perception of risk associated with tobacco use / smoke.
- Perception of factors affecting use / non-use of tobacco.

2.8 Pre-testing the questionnaire

The questionnaire was pre-tested in Johannesburg and Benin City (sites other than those used for the survey). This was to ensure clarity and appropriateness of questionnaire. No further changes were made after piloting.

In Johannesburg, 20 subjects were randomly picked from Wits University and in Park Town, and interviewed. The subject had to be 18 years of age or older on her last birthday. The Ugbowo area of Benin was chosen for pre-testing as this was not a site for the survey. Twenty respondents were interviewed. They were older than 18 years and were interviewed at their homes. All but two could speak English.

2.9 Definition of terms

- Enumeration Area (EA): this is an area covering about two hundred and fifty (250) households (Independent National Electoral Commission, INEC). Appendix C2 is a sketch map of one of such EAs.
- Household: All those who share food, sleeping arrangements, other economic decisions, and slept at the household on at least four nights a week, were considered as members of a household for the purpose of the survey.
- Cigarette: this refers to all forms of smoked tobacco, whether manufactured cigarettes, rowed locally grown tobacco or pipe that was smoked.
- *Tabba*: a mixture of powdered tobacco leaf and sodium bicarbonate similar to snuff used in Southern Africa. This comprised all forms of smokeless tobacco whether instilled into the nostrils, sniffed or put in the cheek for some time and spat out.
- Tobacco use: using tobacco or tobacco product in whatever form on a regular basis or most days of the week.
- Quitter: one that has not used tobacco for the past six months.
- Never used: these are those that never used tobacco on a regular basis. This also includes those that only experimented with tobacco.
- Non-regular smokers: this include respondents who are still using tobacco but not on a regular basis, and have consumed at least 20 packets of cigarettes or 360grammes of tobacco all together or one cigarette per day or one cigar per week.
- Regular Tobacco user: Subjects that use tobacco or tobacco product on a regular basis.

- Experimental tobacco use: Subjects' not presently using tobaccos but admit to having had a couple of cigarettes / tobacco products in the past but not enough to be ranked as tobacco users.
- Light smokers: those using tobacco on a regular basis but less than 20 sticks of cigarettes or its equivalent per day.
- Heavy usage: use of more than 20 sticks of cigarettes per day.

2.10 Recruitment / Training of fieldworkers

A total of twelve (12) fieldworkers were employed for the survey. The criteria for eligibility were being a female, native (or being fluent in the local language) and educated to at least a diploma / post-secondary certificate.

The training was in two stages. First was to familiarize them with the questionnaire and how to conduct interviews, and also identification of study site and sampling techniques. The services of a Cartographer from the National Population Commission (NPC) helped guide fieldworkers to identify specific landmarks present on sketch maps of the enumeration areas. The second stage of the training was to improve the understanding of fieldworkers based on difficulties encountered during the course of piloting the questionnaire.

The training took a total of sixteen (16) hours spread over four (4) days. Particular areas covered during the cause of training included:

- The meaning of research, the objectives of the study, research ethics and issues of confidentiality?

- Gaining access
- Courtesy
- Sampling and selecting participants
- Administering of questionnaire
- Recording data.

2.11 Fieldwork

The fieldwork took three (3) weeks to complete. Interviews were conducted in privacy as much as possible and in the subject's preferred language from the three most spoken languages. Before leaving an EA a quick check on the quality of data collected was carried out by the principal researcher.

Most interviews were conducted in the evenings and weekends where participants were most likely to be at home to avoid bias of selecting only the unemployed.

2.12 Confidentiality

An information sheet was given to participants. It explained the purpose of the study, guarantee of confidentiality, and assurance that there would be no negative consequences for refusal to participate and that any participant could withdraw consent to participate at any time.

Name(s) and addresses were kept on a separate sheet for identification of participants for quality control only but were not included in the analysis and kept by the principal investigator safely. Questionnaires were identified by code numbers only.

2.13 Quality control

Quality of data was assured by checking for completeness of interview and also randomly selecting participants for repeat interviews but by a different interviewer, and then comparing the data obtained.

Where information was incomplete, participants were revisited and data updated and where this was not possible, the questionnaire was discarded. During the field work some respondents were re-interviewed (exact figure not available) and 16 questionnaires were discarded as they were deficiently completed.

2.14 Data capture

Over the period of the survey, the field workers completed 520 questionnaires of which 94.4% (491) were adequately completed. With the assistance of an Epidemiologist colleague, data from the survey was coded in Johannesburg. Information from open ended questions were written down during the process of data entry, coded and analysed manually.

Data was captured using Epi Info (version 6) at the WITS School of Public Health. Data was verified by the method of double entry and cleaned.

2.15 Analysis

The majority of the data collected was categorical. The guiding principle of the analysis was informed by the need to address the question of proportions and what influenced these

proportions, bearing in mind that the main outcome measures expected from the study were the prevalence of tobacco use, forms of tobacco used and proportion of women using each form, and initiating as well as maintaining factors. Socio-demographic characteristics of women using tobacco in Benin City were also important. Descriptive statistics; cross tabulation and chi square were used to determine whether there were significant differences between women who use tobacco and those who did not.

Every single item was analysed separately i.e. analysis per question / item in the questionnaire. Association between factors such as socio-demographic characteristics and tobacco use were determined using the 'chi square' test. Because of the poor response to questions on employment status, income / revenue and household equipment / appliances and parameters measuring socio-economic status, socio-economic status was not analysed for.

Smokeless tobacco (*Tabba*) was not differentiated according to ways of usage due to the small number of participants using sniffed *tabba*. Smokeless tobacco was therefore analysed as a single entity, *tabba* and included those participants who placed it in their cheek and then spat it out and those who sniffed it.

2.16 Ethical considerations

- Ethical approval / clearance for this survey was sought and obtained from the Committee for Research on Human subjects (Medical) of the University of the Witwatersrand. An unconditional approval was granted; *Protocol Number M02-10-29, Ref: R14/49 Okwuolise.*

When Oredo LG was approached for clearance, the board secretary said in Pigeon English “no be question you say you wan ask, I beg go do wetin you wan do, una too know book” meaning “didn’t you say you were only going to ask questions, please go ahead, too much studying is disturbing you”.

- Confidentiality in handling information was maintained during and after this survey. Though, names and addresses were requested during the interview phase so as to allow check-backs where deemed fit, they were on a separate sheet and matched to questionnaires through questionnaire numbers allocated to each.

- Informed consent (verbal consent) was sought and obtained from participants that were interviewed, and their right to decline was not violated. Participants in some cases refused to answer some questions or even declined further interviews. Where selected participant(s) / household(s) refused to be interviewed, such participant(s) / household(s) were replaced with the one to the right.

2.17 Limitations to study

Though steps were taken to ensure good data quality, a number of factors may influence data quality thus generated.

- Firstly, though persons well versed in the *Edo* and *Pigeon English* languages were used to translate questionnaire and checked by fieldworkers, it is not impossible that the implied meanings of questions were missed out during translation. for example questionnaire translated to mean question.

- It is worth mentioning at this juncture that a lot has changed since the last census in 1991. New houses have been built whilst some older ones have fallen down. There is also the problem of in / out migration of people. The first task was therefore to carry out a quick mapping and household listing in those enumeration areas selected for the survey. There was also the difficulty encountered in getting the "A-Z" map of Benin City and sketch maps of EAs. Firstly, a recent (up-to-date) map of Benin was not available, and at the National Population Commission (NPC), the Director not being available to give the go ahead to release the sketches or the Cartographer and / or Store Manager not around to issue sketch maps.
- There was this 'air' of distrust once the study (interview) was mentioned in some households. Notable reasons given were as follows: fear of thieves, many surveys already conducted but no action taken yet from results of such surveys and varying beliefs about divulging information about oneself to stranger(s).
- Where participants could not speak any of the three languages and were replaced, this may bring in selection bias as some individuals are thereby excluded. Three households were thus replaced.
- Participant selection posed some problems too. In a number of households, all eligible prospective participants were not at home and some unwilling to participate.
- Prevalence of tobacco use was based on self reporting and there was no objective way of obtaining this information. The problem of under reporting can therefore not be excluded.

3.0 RESULTS

3.1 Socio-demographic characteristics

3.1.1 Age

Four hundred and ninety-one participants were included in the analysis after 3 replacements and 16 questionnaires were discarded. Overall, 92.3 % (453) of participants indicated their ages at their last birthdays, which ranged from 18 years to 90 years with a mean age of 34 years and median age of 29 years. Nearly fifty-one percent [50.9%, n=225] were 30 years and below on their last birthdays. It shows that more participants were from the lower age groups typical of developing countries, with the peak response from age group 21-30 and least from the age group 80+. Their proportions are respectively 43.9 %(n= 195) and 0.7 %(n= 3). Figure 3.1 shows the age distribution of participants.

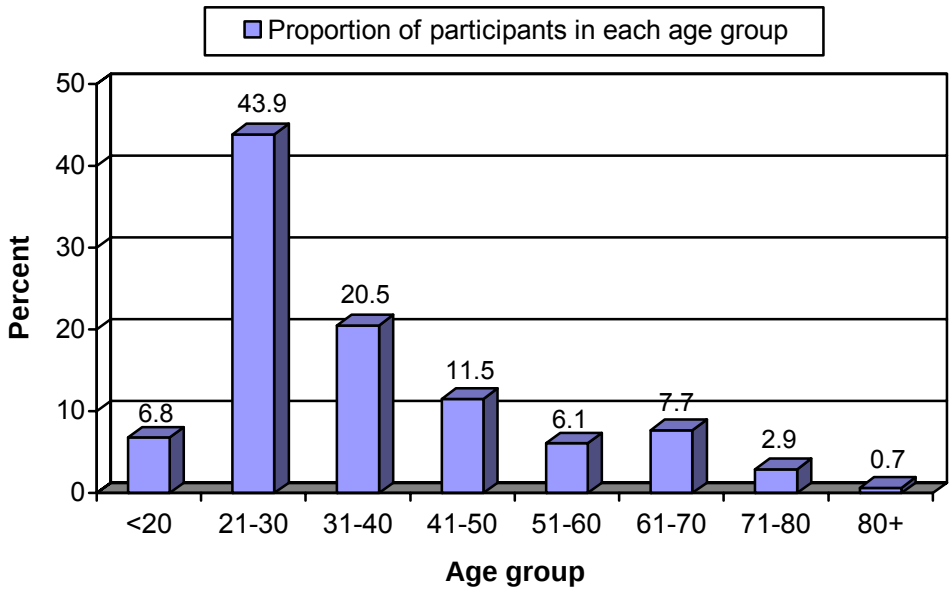


Figure 3.1 Age distribution of participants

3.1.2 Marital status of participants

Table 3.1 shows the marital status of participants. More than half of the respondents [55.7 %, n=273 out of 490] were single (have never been married) and 29.0% (n=142 out of 490) of the respondents were married at the time of the survey. About one in ten (11.5%, n=56) were widowed, divorced or separated.

Table 3. 1: Marital Status of participants

Marital Status	Frequency	Percentage	Cum. Frequency
Single	273	55.7	55.7
Separated	17	3.5	59.2
Living together	15	3.1	62.2
Divorced	13	2.7	64.9
Widowed	26	5.3	70.2
Married	142	29.0	99.2
Polygamous married	4	0.8	100.0
Total	**490**	**100.00%**	**100.00%**

3.1.3 Educational status of participants

The distribution of participants across the various education levels is presented in figure 3.2. The highest educational class completed was used as a reference for the analysis. Over a third [34.8 %, n=167] of participants had secondary education and 6.8% (n=33) indicated that they had no formal education. Almost half (49.4%, n=243) had or were at the completion of tertiary education including post-graduate studies.

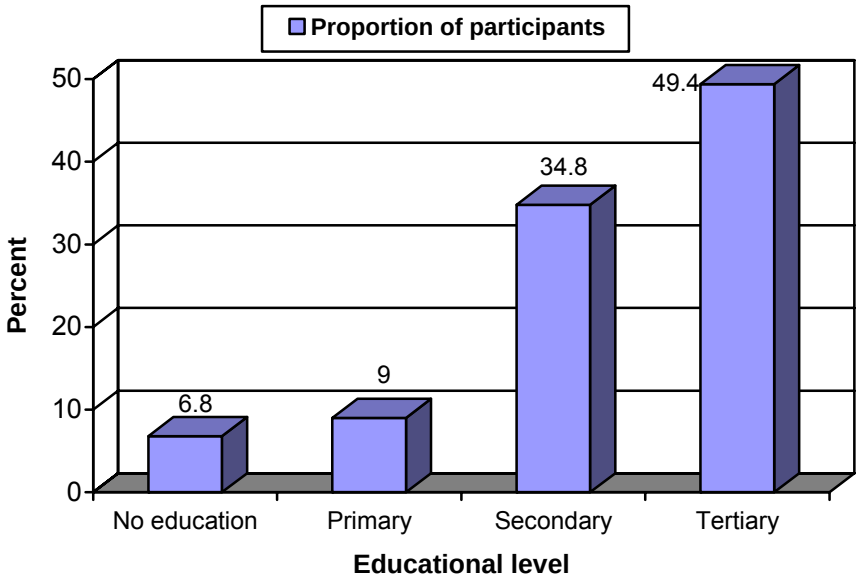


Figure 3.2 Distribution of participants by educational level

3.1.4 Employment status

Table 3.2 and figure 3.3 show the employment status of women that participated in the survey. Nearly fifty percent (45.3%) had one form of employment or the other, and

almost a third of participants (31.9 %) were studying. Nearly a tenth of them were staying at home by choice.

The data on employment was collapsed with participants on full time, part time, casual and temporary employments classified as employed and presented in figure 3.3.

Table 3. 2: Employment Status

Employment Status	Frequency	Percentage	Cum. Frequency
Full Time	68	14.1	14.1
Part Time	28	5.8	19.9
Casual	11	2.3	22.2
Temporary	20	4.1	26.3
Unemployed	38	7.9	34.2
Student	154	31.9	66.0
Home by Choice	47	9.7	75.8
Pensioner	17	3.5	79.3
Self employed	92	19.0	98.3
Others	8	1.7	100.0
Total	**483**	**100.00%**	**100.00%**

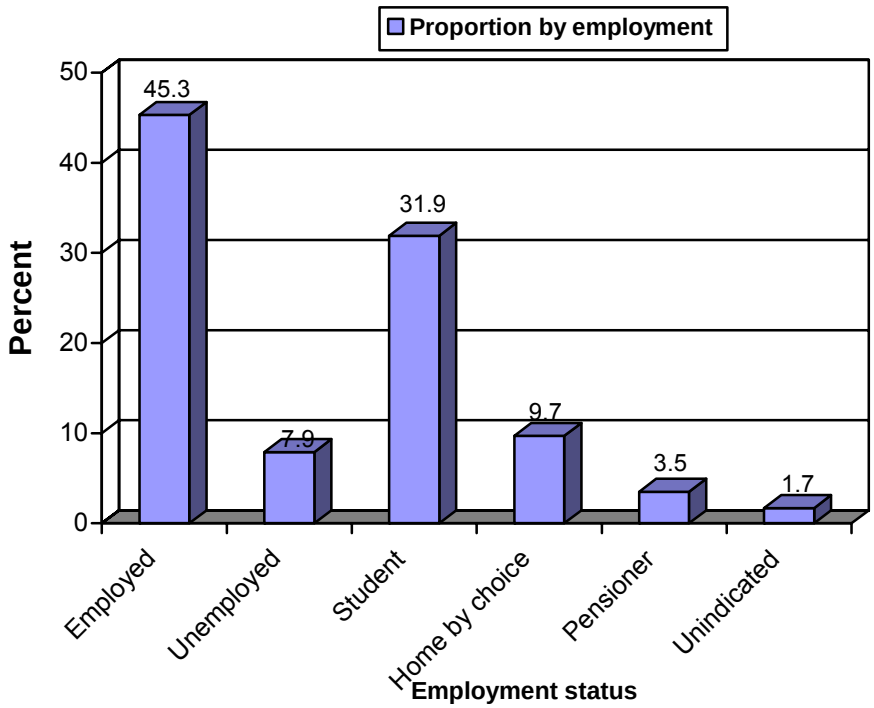


Figure 3.3: Distribution of participants by employment

3.1.5 Participants language preferences

Figure 3.4 shows the language preferences of the participants. The most spoken language is Pigeon English, a form of English adapted to fit the local environment with 32.2 %(n=157), closely followed by Edo language [29.0 %(n=141)] and English [25.7 %(n=125)]. Edo is the language of the native *Binis.* Other languages spoken contributed to 13.1 %(n=64) and these are predominantly *Efemai*, *Esan*, *Igbo*, *Urhobo*, *Yoruba*.

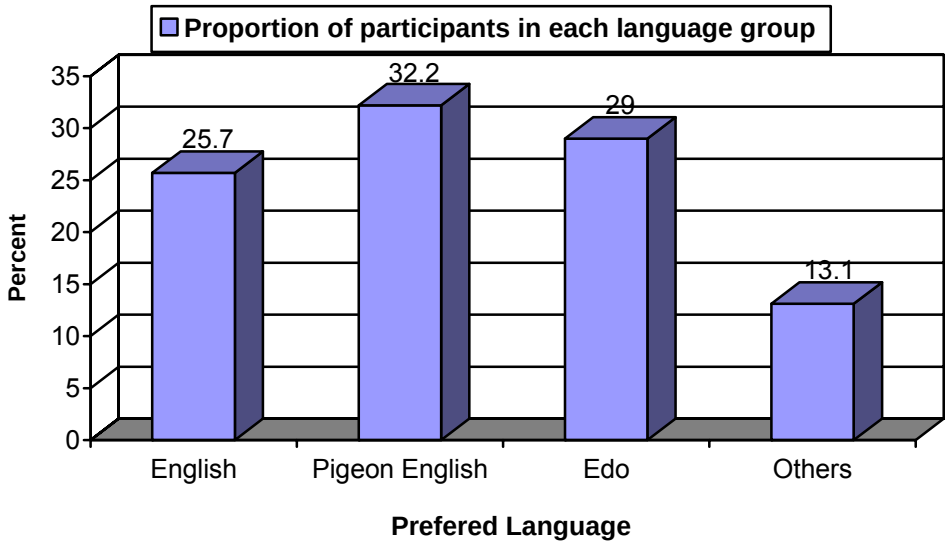


Figure 3.4 Participants distribution across various languages

3.1.6 Religious affiliation of participants

Most of the respondents reported practising the Christian religion (88.5%,n=434). This can be extrapolated to mean nine of every ten participants professing the Christian faith. Other religious groups include Islam, Traditional religious beliefs, etc classified as 'Others' because of their very small proportions contributing 11.5% (n=56). The religious affiliation of participants is shown in figure 3.5.

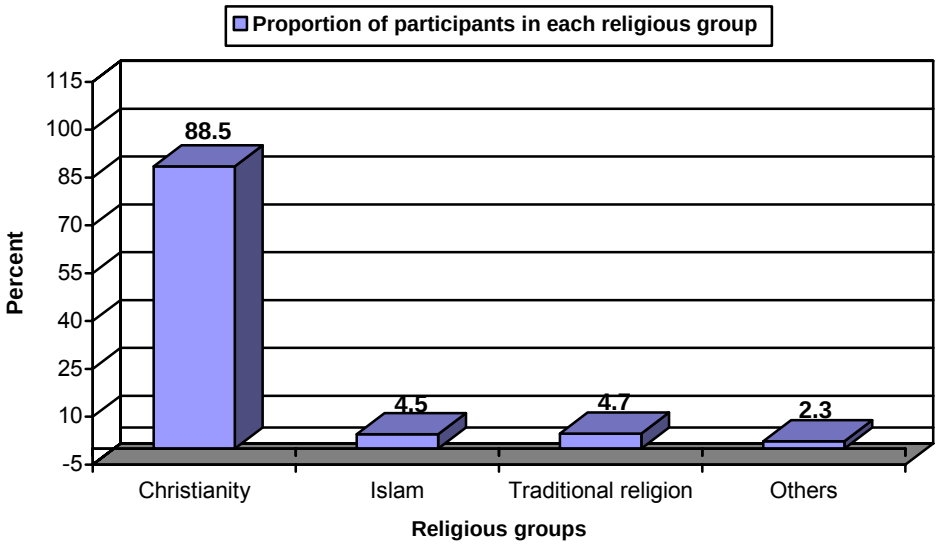


Figure 3.5: Distribution of participants across religious groups

3.2 Prevalence and Patterns of tobacco use

3.2.1 Prevalence of tobacco use

Table 3.3 shows the number of participants that indicated that they had used at least 100 cigarettes or 5 tins / bags of *Tabba* in their life time. It shows that 8.8 %(n=43) of the 491 women who participated had used at least 100 sticks of cigarettes or 5 tins of *Tabba*.

Of the 43 women that reported using tobacco, over half (51.2%, n=22) reported daily tobacco use, nearly one-third (32.6%, n=14) are occasional users, and 16.3% (n=7) reported to have stopped the use of tobacco for periods less than six (6) months and can therefore not be said to have quit tobacco use. Participants that had used tobacco before

but have abstained for six months or more were classified as ex-tobacco users and part of the larger non-tobacco user group.

Table 3. 3: Tobacco use status

Tobacco use	Frequency	Percentage	Cumm. %
Yes	43	8.8%	8.8%
No	448	91.2%	100.0%
Total	491	100.0%	

3.2.2 Forms of tobacco use

Findings showed that different forms of tobacco were used within the population. This is shown in figure 3.6. Of the forty-three that indicated that they use tobacco, over a third (37.2%) used cigarettes i.e. smoked tobacco, 62.8% (n=27) used *tabba* which is the smokeless form of tobacco.

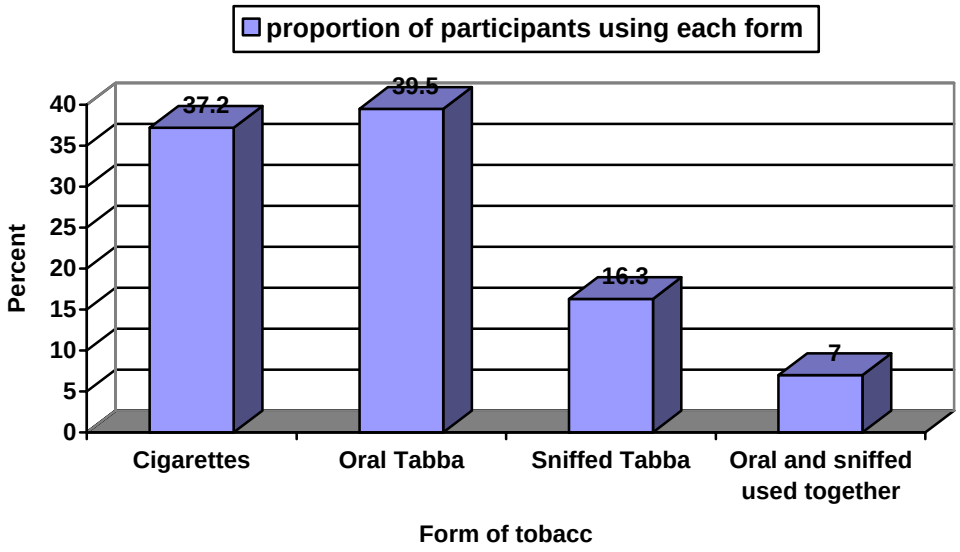


Figure 3.6: Distribution of tobacco users for each form of tobacco

3.2.3 Tobacco use across age group

3.2.3.1 Age at onset of tobacco use

Participants using tobacco started at different ages, with eight percent reporting to have started by age 15 years. Thirty-two percent (n=14) started by the eighteenth birthday with nearly half [48 %, n=21] of the participants using tobacco, haven started by their twentieth birthday.

3.2.3.2 Patterns of tobacco use across age group

Figure 3.7 shows the distribution of use of tobacco across the age groups. From the figure, whereas the tendency to smoke (use cigarette) is higher amongst the younger age groups, the tendency to use *tabba* is higher amongst the older age groups. Among the

participants, nearly a third (31.7 %, n=14) of tobacco users was in the 21-30 age group and nearly one-fifth (17.1%, n=7) fell within the age group 71-80 years.

Whilst for smoked tobacco (cigarette), more than half (56.3%, n=9) were in the age group 21-30, more than one-third (35.3%, n=6) of participants using smokeless tobacco (*tabba*) were in age group 71-80. No participant age 80 and above indicated using smoked tobacco (cigarettes).

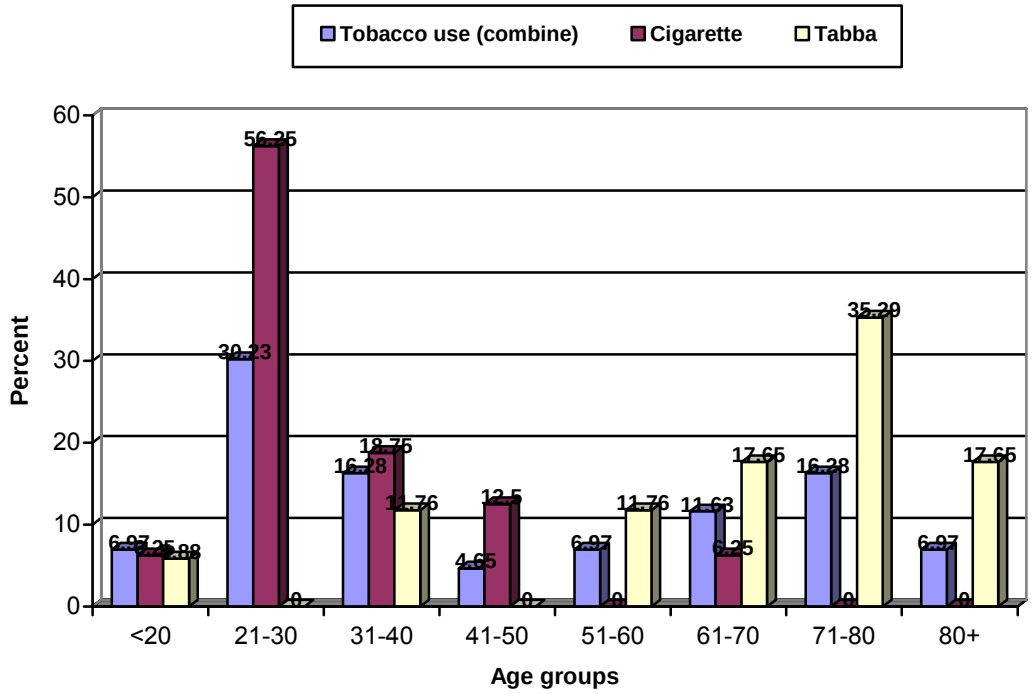


Figure 3.7:Tobacco use across age groups

3.2.4 Quantity of tobacco used by participants

Table 3.4 shows the average number of cigarettes smoked per day. Of those who smoked cigarette, 61.5% (n=8) smoked 5 sticks or less per day, 15.4% (n=2) smoked between 6 and 10 sticks per day and the rest 23.1% (n=3) smoked 16 or more sticks per

day but less than 20 sticks on each day. *Tabba* use on the other hand was difficult to measure adequately as it is locally produced with varying amounts of tobacco leaf added depending on who is producing it. Also, *tabba* is packaged differently and there is no standard measure.

Table 3. 4: Quantity of cigarettes smoked per day

No. of cigarettes smoked / day	Frequency	Percentage	Cumm. %
1-5	8	61.5%	61.5%
6-10	2	15.4%	76.9%
16-20	1	7.7%	84.6%
21-25	1	7.7%	92.3%
26-30	1	7.7%	100.0%
Total	13	100.0%	

3.2.5 Stopping tobacco use

More than half (56.4%, n=22) of respondents tried to stop the use of tobacco product(s). The main reason why they tried to stop was health reasons / warnings as reported by 55.6% (n=15) of respondents. The next reason in importance was advice from religious leaders (18.5%, n=5).

Fifteen percent (n=5) said they will still be using tobacco products in the next 5 years, 28.2% (n=11) said they will not and the larger majority 59.0% (n=23) do not know whether or not they will be using tobacco.

Almost eight percent (7.7%, n=3) said they will restart tobacco use if the health problem (e.g. tooth ache) that drove them into using tobacco recrudesces, price drops after an increase or to correct their fray nerves.

3.3 Determinants of tobacco use

3.3.1 Tobacco use by marital status

The relationship between marital status and tobacco use was explored. This is presented in table 3.5. Due to the small number of respondents, the categories were collapsed into "Single" (including Single (never married), Separated, Divorced and widowed) and "Married" (married whether in a monogamous or polygamous setting and those living together). Marital status showed no association with tobacco use, OR = 1 [C.I. = 0.47-2.09].

Table 3. 5: Association between marital status and tobacco

Marital Status	Tobacco use	Non use	Total
Married	32.5% (13)	32.9% (133)	146
Not married	67.5% (27)	67.1% (271)	298
Total	40	404	444

3.3.2 Tobacco use and education

Table 3.6 shows the tobacco status of respondents across educational levels whilst figure 3.8 shows the proportions of users of the two main forms of tobacco used. With increasing education, the number of women smoking was observed to increase, but declined for *tabba*.

More than half (56.3%, n=9) of those reported using *tabba* had no education whereas 75.0% (n = 12) of those that use cigarette (smoked tobacco) had tertiary education. With education as exposure variable and cigarette use (smoked tobacco) as outcome

variable, the table was collapsed. At the 95% Confidence Interval (C.I.), Relative Risk (R.R.) was 3.10(CI=1.01-9.48) and p-value of 0.040. The effect of education on tobacco use was explored further. The tendency to use tobacco was found to increase with increasing education [χ^2 =25.77; df = 1; p <0.001].

Table 3. 6: Tobacco use and Educational status

Educational Level	Ever smoked		Total
	Yes	No	
No Formal Education	23.8% (10)	5.2% (23)	6.8% (33)
Primary	7.1% (3)	9.2% (41)	9.0% (44)
Secondary	14.6% (6)	36.8% (164)	34.8% (170)
Tertiary	54.8% (23)	48.8% (218)	49.4% (241)
Total	**42**	**446**	**488**

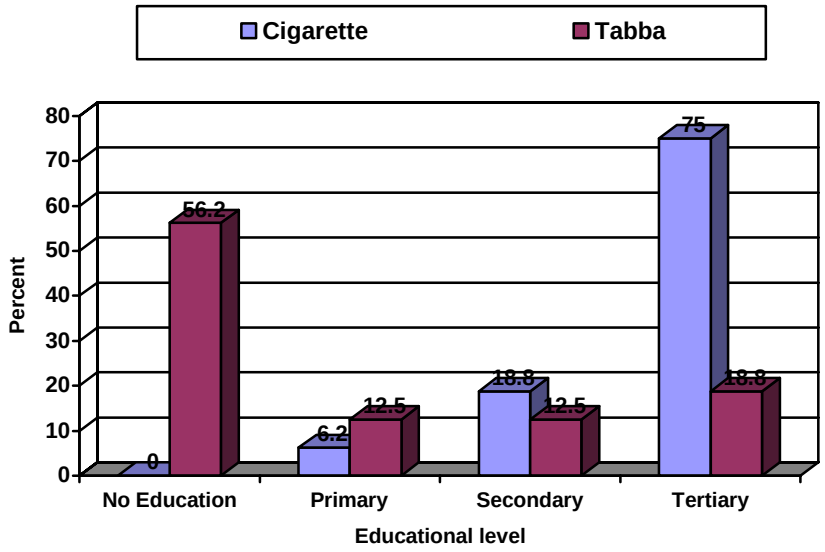


Figure 3.8: Patterns of tobacco use with education

3.3.3 Tobacco use and employment

Tobacco use within the different employment groups is shown in table 3.7, while preference for a particular form of tobacco is also represented but in graphical format in figure 3.9. Over eighty-five percent (n=25) of those with a source of income (employed or students) tend to smoke more than those without a source of income. Almost two-thirds of respondents using *tabba* are either house wives or self-employed. This observed difference was found to be statically not significant [$\chi^2 = 24.79$; df = 5; p = 0.47]. Over ten percent of those using smokeless forms of tobacco did not specify their type of employment.

Table 3. 7: Tobacco use and employment

Employment status	Tobacco status	Frequency	Percentage	Cumm. %
Formal employment	Use Non-use	5 104	11.6% 26.3%	11.6%
Unemployed	Use Non-use	4 32	9.3% 8.1%	20.9%
Student	Use Non-use	11 134	25.6% 33.8%	46.5%
House wife	Use Non-use	6 39	14.0% 9.8%	60.5%
Pensioner	Use Non-use	4 11	9.3% 2.8%	69.8%
Self employed	Use Non-use	11 70	25.6% 17.6%	95.4%
Unspecified job	Use Non-use	2 6	4.6% 1.5%	100.0% 100.0%
Total	Use Non-use	43 396	100.0% 100.0%	

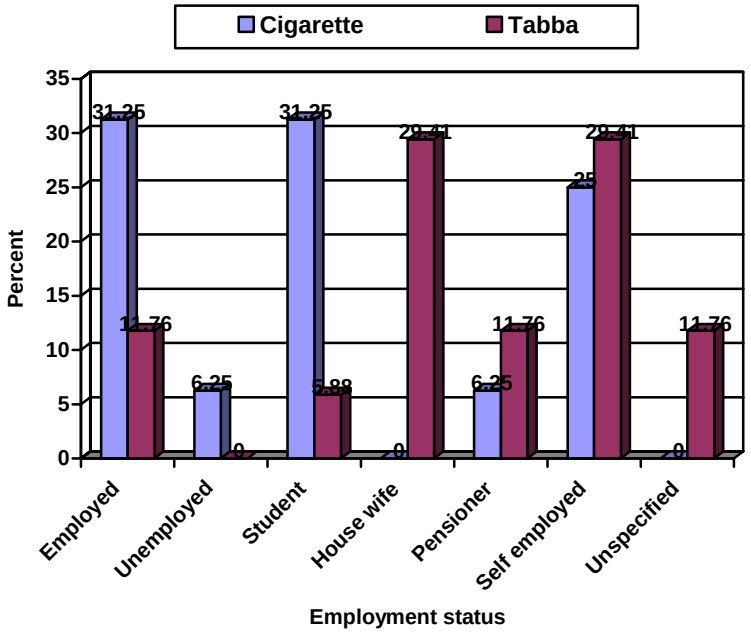


Figure 3.9: Pattern of tobacco use with employment

3.3.4 Tobacco use and religion

Tobacco use across the various religious groups is shown in table 3.8 and figure 3.10). Of those who used tobacco (Cigarettes and tabba), over sixty percent (n=27) indicated that they were Christians and (18.65%, n=8) being ancestral worshippers, the second largest religious group. The pattern was also similar with the different forms of tobacco; nearly two-thirds of those smoking cigarettes (62.5%, n=10) were of the Christian faith. There was no statistically significant relationship between religion and tobacco use [$\chi^2 = 33.78$; df = 3; p = 0.29].

Table 3. 8: Religion and tobacco use

Religious affiliation	Tobacco status	Frequency	Percentage	Cumm. %
Christianity	Use	27	62.8%	62.8%
	Non-use	403	91.0%	91.0%
Ancestral worship	Use	8	18.6%	81.4%
	Non-use	14	3.1%	94.1%
Islam (Muslim)	Use	4	9.3%	90.7%
	Non-use	19	4.3%	98.4%
Free thinker	Use	4	9.3%	100.0%
	Non-use	7	1.6%	100.0%
Total	Use	43	100.0%	
	Non-use	443	100.0%	

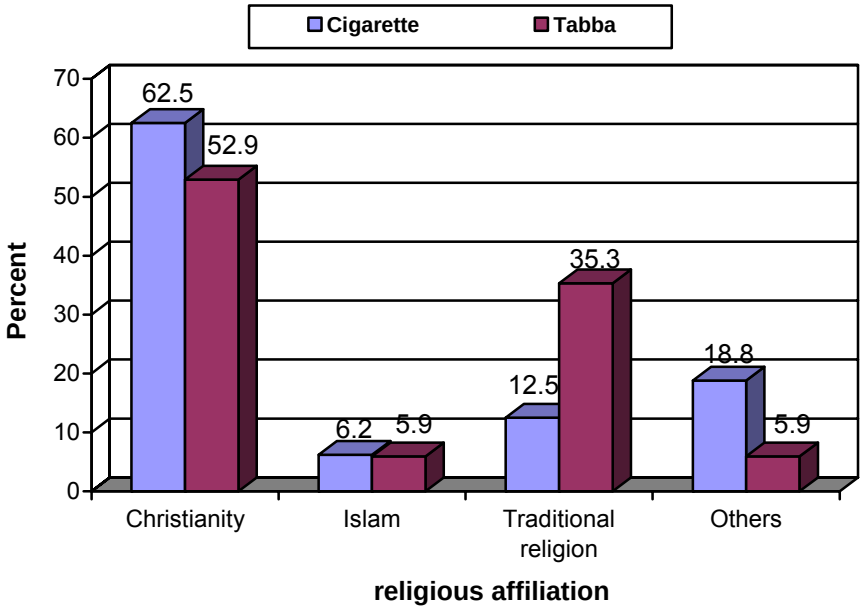


Figure 3.10: Pattern of tobacco use across religious groups

3.3.5 Tobacco use with language

In the study, the influence of home language on tobacco use was also investigated. Table 3.9 and figure 3.11 show the result of the interaction between tobacco and home language. Cigarette use was almost evenly distributed throughout the different language groups, ranging from almost twenty percent (n=3) of smokers being Edo speaking, 25% (n=4) being English, 25% (n=4) being Pigeon English and 31.3% (n=5) for the other languages. Tabba use was however commoner among the native Edos comprising over sixty percent (64.71%, n=11) and least among those with English language as their home language (5.88%, n=1).

Table 3. 9: Home language and tobacco use

Home language	Tobacco status	Frequency	Percentage	Cumm. %
Pigeon English	Use	8	18.6%	18.6%
	Non-use	117	26.4%	26.4%
English	Use	9	20.9%	39.5%
	Non-use	148	33.3%	59.7%
Edo	Use	17	39.6%	79.1%
	Non-use	124	27.9%	87.6%
Others	Use	9	20.9%	100.0%
	Non-use	55	12.4%	100.0%
Total	Use	43	100.0%	
	Non-use	444	100.0%	

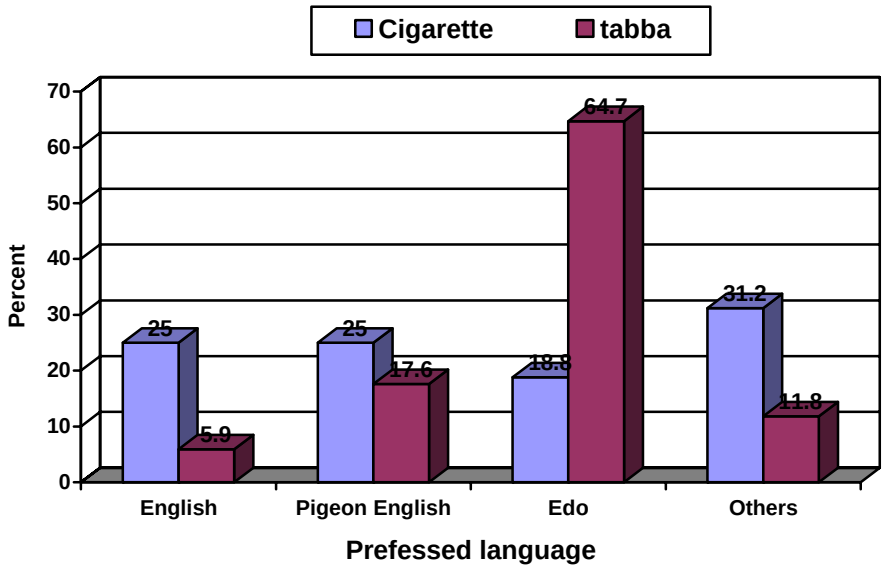


Figure 3.11: Pattern of tobacco users across languages

3.3.6 Exposure to marketing / media

Figures 3.12 and 3.13 represent the effect of the activities of tobacco companies on sample population in the areas of advertising, sponsorship(s) and promotion(s). Tobacco users reported being exposed to more than one brand of tobacco product being advertised compared to non-users reported [$\chi^2 = 6.61$, df = 6; p=0.36]. More so, tobacco users reported seeing more adverts in billboards, TV/Radio and others modes of advertisement compared to non-users [$\chi^2 = 5.72$; df = 5; p=0.34]. The most common medium of advertisement is billboards followed by in-shop adverts as reported by both users and non-users of tobacco products. However, the observed differences were not statistically significant.

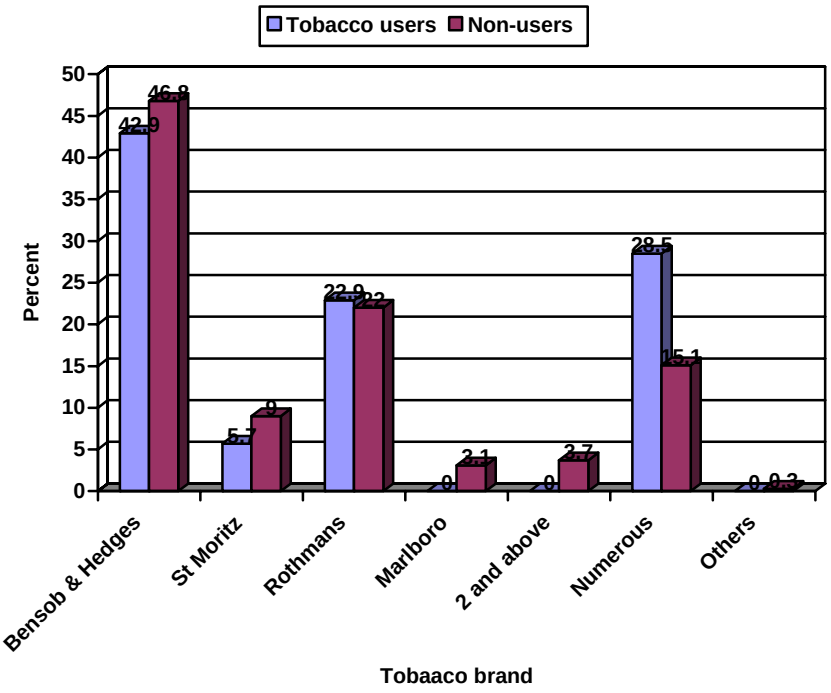


Figure 3.12: Participants exposure to tobacco advertising

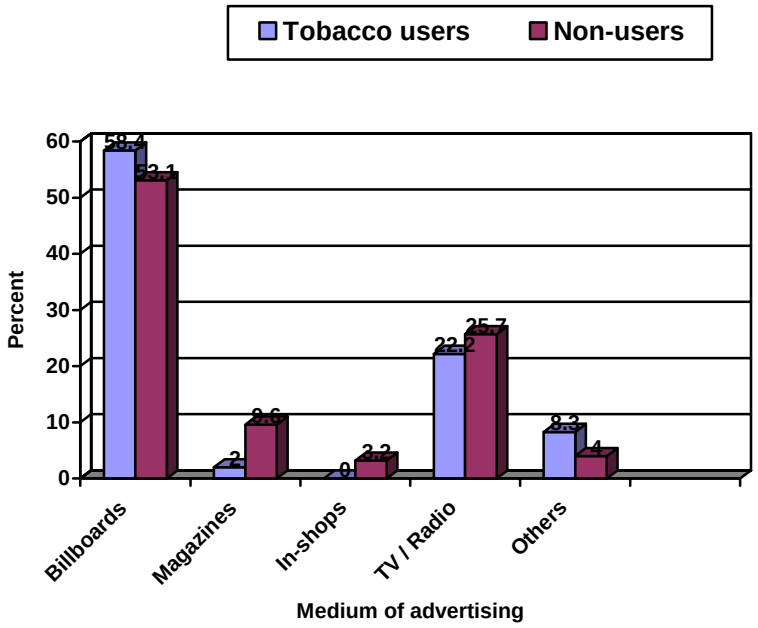


Figure 3.13: Proportion of participants exposed to different advert media

Nearly ninety-four percent of respondents assented to seeing actors (and actresses alike) using tobacco products when they watch movies or go to cinemas (93.5%, n=452).

3.3.6.1 Sponsorship by Tobacco Company / brands

Tobacco companies and / or brands sponsor events like sports, musical concerts, beauty pageants, etc. From figure 3.14, 42.9% (n=18) of tobacco users compared to 31.4% (n=141) of Non-users, reported awareness of sponsorship of events by tobacco companies (brands). This was not statistically significant [$\chi^2 = 4.10$; df = 2; p= 0.13].

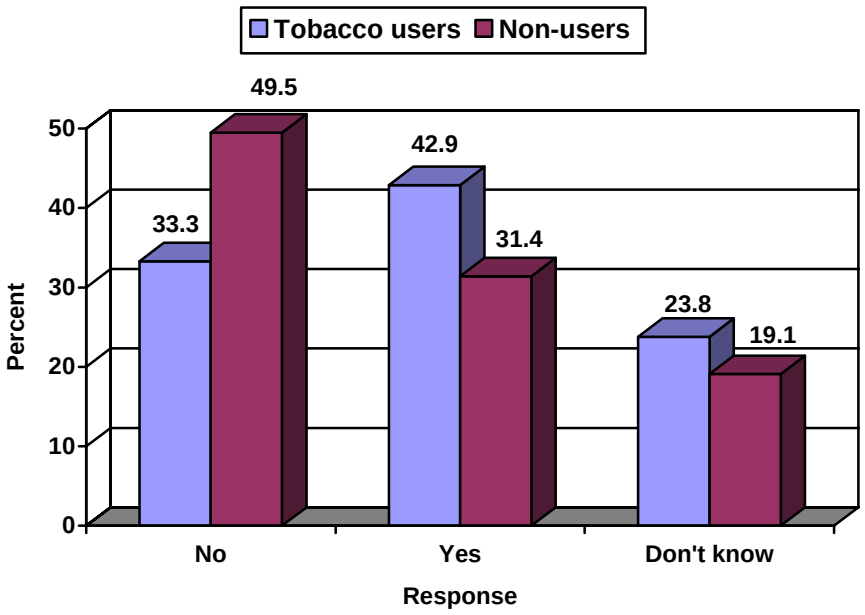


Figure 3.14: Participants' awareness of sponsorship

3.3.6.2 Souvenirs with tobacco labels

Figure 3.15 shows the proportion of participants (whether using tobacco or not) that had item(s) with cigarette labels (souvenirs) in their home(s). Almost half of tobacco users indicated that they had souvenirs bearing cigarette labels in their homes whereas less than a third of non-users of tobacco had such souvenirs. Souvenirs include t-shirts, ball pens, lighters, etc. The effect of souvenirs was explored further. The odds of having souvenirs to tobacco use was 2.55 [(CI = 1.27 – 5.10), p= 0.003], i.e. having tobacco product souvenirs was significantly associated with use of tobacco.

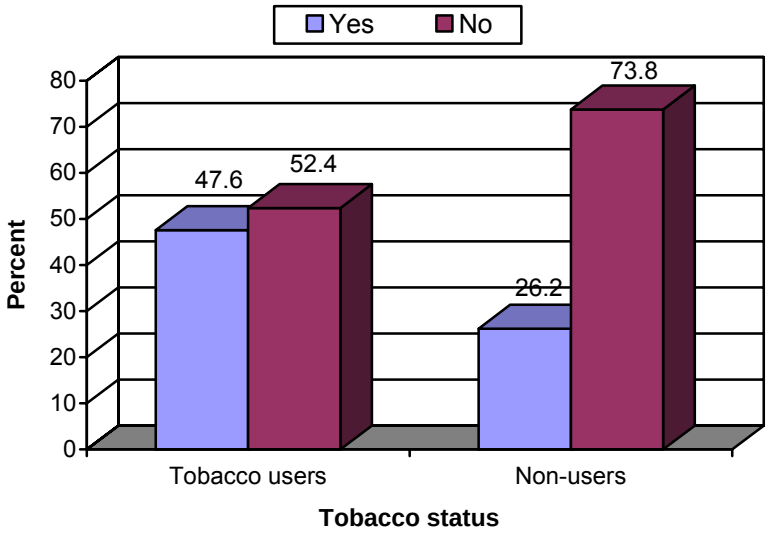


Figure 3.15 Proportion of participants having souvenirs

3.3.6.3 Health warnings on tobacco packs

As part of the bid to control tobacco use, tobacco companies are required by law to carry health warnings on their products. Ninety-seven percent (n=34) of tobacco users reported having noticed health warnings on cigarettes' packs. On the other hand, 98.7%

(n=389) of non-users of tobacco reported seeing health warnings on cigarettes' packs. The presence of health warnings on tobacco packs did not show any statistical significance on tobacco use [$\chi^2 = 5.04$; df = 4; p = 0.28].

3.3.6.4 Anti-tobacco campaigns

Participants' awareness of anti-smoking campaigns / programmes seen or heard within one month prior to this survey is shown by figure 3.16. Approximately, three-fifth of tobacco users and non-users of tobacco reported not to have seen any anti-smoking campaign / programme during the one month prior to the survey.

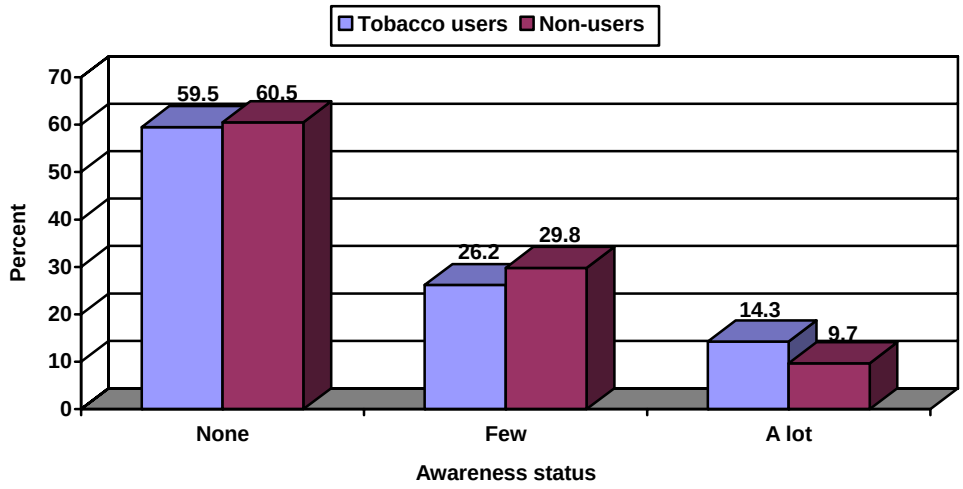


Figure 3.16: Participants awareness of anti-tobacco campaign(s)

3.3.7 Parental / Peer tobacco use

From the survey it was found that 23.3% (n=10) of the participants using tobacco have fathers that use tobacco, mothers of 7.0% (n=3) of participants were using tobacco, more than a quarter (27.9%, n=12) have brothers using tobacco and sisters of almost

twelve percent (11.6%, n=11) of participants were using tobacco. Importantly, over two-thirds (44.2%, n=19) of them had friends that use tobacco. Mother [χ^2= 4.73; df=1; p = 0.03], sister [χ^2= 5.25; df = 1; p = 0.02] and friends [χ^2 = 4.63; df = 1; p = 0.03] tobacco use were statistically significant with participants' tobacco use. Table 3.10 summarises responses to parental and peer tobacco use amongst the survey respondents.

Table 3. 10: Tobacco habits of significant individuals

Category	Yes	No	Chi-square	p-value
Father	32.9%(23)	67.1%(47)	3.3(df=1)	0.07
Mother	81.3%(26)	18.7%(6)	4.73(df=1)	0.03*
Grandfather	43.4%(23)	56.6%(30)	5.2(df=1)	0.02
Grandmother	57.8%(26)	42.2%(19)	0.01(df=1)	0.92
Brother	25.9%(22)	74.1%(63)	1.2(df=1)	0.28
Sister	70.3%(26)	29.7%(11)	5.25(df=1)	0.02*
Aunt	58.1%(25)	41.9%(18)	0.12(df=1)	0.73
Uncle	18.0%(20)	82.0%(91)	0.48(df=1)	0.45
Friend	17.1%(21)	82.9%(102)	4.63(df=1)	0.03*
Co-worker	59.0%(23)	41.0(16)	3.6(df=1)	0.06

*Statistically significant at 95% CI

3.3.8 Preferred place to use tobacco

The preferred place to use tobacco was either alone or at gatherings (parties with friends). Two-thirds (66.7%, n = 29) of tobacco users will not want to use tobacco in

the presence of their parents, children or religious leaders. Other places where the use of tobacco was avoided were public places.

3.3.9 Reasons for starting to use tobacco

Half of tobacco users reported to have been introduced to tobacco by their friends. Almost a third (30.9%, n =13) tried it when sent to buy tobacco or out of curiosity. Various reasons were given for continuing to use tobacco. Half of the participants who use tobacco reported using it because either their friends or family members do. A quarter (26.2%, n = 11) use tobacco for psychological factors (i.e. to steady their nerves, relieve stress or anxiety), and more than twenty percent (23.8%, n = 10) were using tobacco for social reasons (i.e. to feel cool or to have a sense of belonging) and medicinal reason (i.e. to cure toothache).

3.3.10 Effects of tobacco use

More than half (51.4%, n =22) of those who use tobacco enjoy mostly the euphoria resulting from the use of tobacco, nearly a fifth (17.1%, n = 7) of them enjoy the analgesic effect (pain relief) of tobacco, about five percent (5.8%, n = 2) like the social acceptance they got due to their using tobacco, and a quarter (25.7%, n = 11) did not report any enjoyable effects of using tobacco.

The most dislikes reported by tobacco users were dirt, smell and withdrawal symptoms (53.8%, n=23), hate for the respiratory symptoms of sneezing and coughing (33.3%, n = 14) and the discolouration of teeth (7.7%, n = 3).

3.3.11 Signs of addiction

Nearly sixty percent (56.4%) had tried to stop and only three participants (13.6%) could stop for six months or longer. More than half (52.9%) reported that it was difficult stopping the use of tobacco. Approximately three of every five (58.5%) of tobacco users reported that they were having the desire to use tobacco first in the morning.

3.3.12 Deterrents to tobacco use

The main reason reported by participants using tobacco that will make them want to stop the use is the harmful effects on health. Half of tobacco users (n = 22) reported that they would stop the use of tobacco products if they experience harmful effects. Some said they would stop tobacco use when pregnant (11.9%, n = 5), when advised by ex-tobacco users to quit (11.9%, n = 5) and when advised to quit by religious leaders (9.5% n = 4) or Doctor / health worker (14.3%, n = 6).

3.3.13 Where to seek help

Of a total of 34 tobacco users that indicated where they would go seek help, nearly sixty percent (58.8%, n = 20) would seek health from a health worker on tobacco related issues, about a quarter (23.5%, n= 8) would go to religious leaders and one-tenth (11.8%, n =4) prefers going to either friends or family members. Just under six percent (5.9%, n = 2) had no idea who exactly to go to for help.

3.4 Participants opinion about recommending tobacco

Responses to the question of whether or not they would recommend tobacco is shown in table 3.11. Of the 478 participants that responded to the question, about nine in every ten participants [91.2 %, n=436] said they would not, 6.1% [n=29] said they would recommend tobacco and 2.7% [n=13] do not know whether they would recommend tobacco or not.

An equal proportion (42.9%, n = 18) of tobacco users would respectively recommend tobacco and not recommend it, with 14.2% (n=6) not knowing whether they would recommend tobacco or not. Exploring this relationship further, tobacco users were more likely recommend tobacco to others than non-tobacco users [$\chi^2 = 137.2$, df=2; p <0.001].

Table 3. 11: Opinion about recommending tobacco

Recommend	Tobacco Status	Frequency	Percentage %	Cumm %
No	Use	18	42.9	42.9
	Non-use	418	95.9	95.9
Yes	Use	18	42.9	85.8
	Non-use	11	2.5	98.4
Don't know	Use	6	14.2	100.0
	Non-use	7	1.6	100.0
Total	Use	42	100.0	
	Non-use	436	100.0	

3.4.1 Reasons to recommend tobacco or not

From the survey, several reasons were given as to why tobacco will be recommended or not. These were post-coded into groups. People would tend to recommend tobacco mostly for medicinal and / or psycho-social reasons whereas those not recommending it

would refuse to do so mostly due to the negative health effects and tobacco use being seen as immoral ("ungodly"). Tables 3.12and 3.13 show the reasons why participants will or will not recommend respectively.

Table 3. 12: Reasons for recommending tobacco

Reason	Recommend	Frequency	Percentage
Medicinal	Yes	15	3.7%
Psycho-social	Yes	12	3.0%

Table 3. 13: Reasons for not recommending tobacco

Reason	Recommend	Frequency	Percentage
Harmful	No	316	78.4%
Anti-Religion	No	6	1.5%
Immoral	No	49	12.2%
No reason	No	5	1.2%

3.4.2 Tendency to recommend tobacco across age group

Figure 3.17 shows the age group(s) of participants and their tendencies to recommend tobacco within the sample. Respondents age group 31-40 had the highest proportion of wanting to recommend tobacco (24.1%, n=7) and the least proportion was age group 51-60. The younger age groups were more likely to recommend tobacco compared to the older age group [$\chi^2 = 29.33$; df=14; p = 0.01].

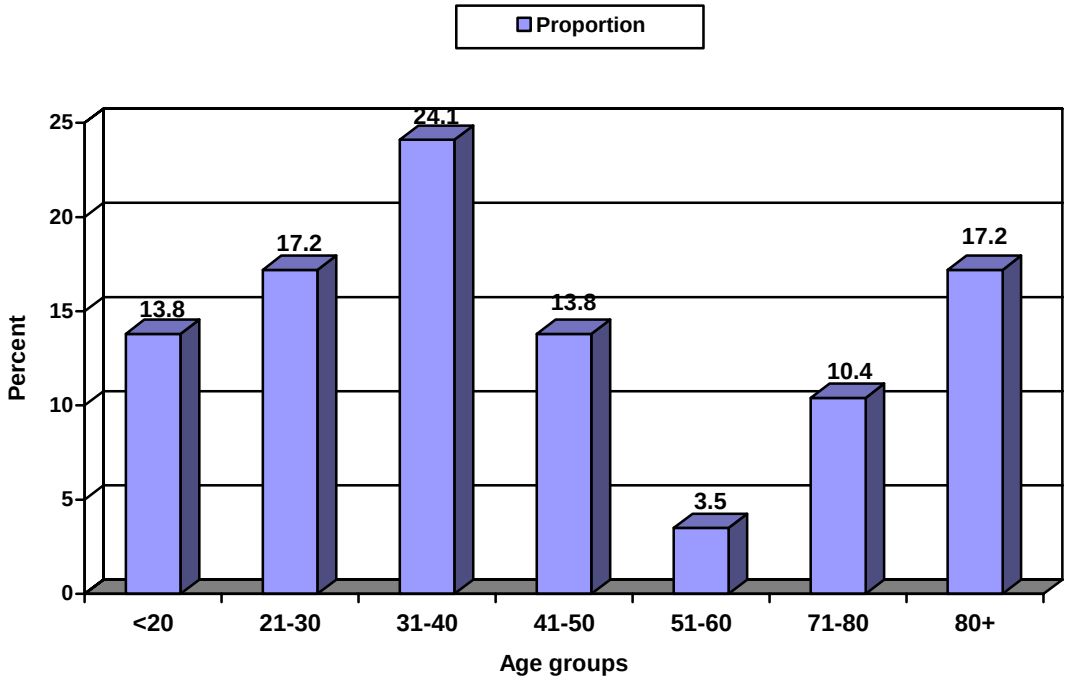


Figure 3.17: Tendency to recommend tobacco across age group

3.5 Knowledge, attitude and beliefs about tobacco and its control

The knowledge, attitudes and beliefs of both tobacco users and non users toward tobacco, and towards tobacco control / regulation varied widely. These are represented in tables 3.14, 3.15 and 3.16.

Most of the participants reported to have knowledge of the harm associated with tobacco use. Over half (55.8%, n=24) of tobacco users and almost ninety percent (88.7%, n=394) of those not using tobacco wanted it to be avoided as it is harmful [χ^2= 48.84 df = 4; p <0.001].

Major differences occurred in the opinion of participants about measures to control tobacco use. Over half of tobacco users (53.5%, n=23) and non-users (76.8%, n=342)

would want tax on tobacco products to be increased as a measure to reduce consumption [$\chi^2 = 14.07$; df=4; p = 0.01]. Tobacco users (83.7%, n =36) and non-users (90.7%, n=358) would support having educational programmes at schools teaching the dangers of tobacco use [$\chi^2 = 8.80$; df = 4; p = 0.07). Tobacco users (48.8%, n=21) would want to have health warnings on packs to remain, ban on public advertising (39.6%, n=18) and the sale of tobacco products to women be prohibited (34.9%, n=15). Non-users of tobacco on the other hand, would want to have health warnings on packs (69.3%, n=302), bans on public advertising (76.3%, n=335), the sale of tobacco products to women prohibited (74.5%, n=325), totally ban tobacco adverts (70.19%, n=305) and total ban on tobacco products (83.0%, n=360).

Table 3. 14: Knowledge of participants about tobacco

Test Statement	Tobacco status	Agree strongly	Agree	Disagree	Disagree strongly	Don't know
Smoking while pregnant does not affect child	Use	9.3% (4)	14.0% (6)	18.6% (8)	23.3% (10)	34.9% (15)
	Non-use	10.9% (48)	10.2% (45)	15.8% (70)	35.5% (157)	27.6% (122)
Tobacco is additive and difficult to stop	Use	30.2% (13)	34.9% (15)	0.9% (4)	0.0% (0)	25.6% (11)
	Non-use	31.4% (138)	38.9% (171)	10.0% (44)	3.7% (17)	15.9% (70)
Tobacco is harmful and should be avoided	Use	23.2% (10)	32.6% (14)	18.6% (8)	16.3% (7)	9.3% (4)
	Non-use	54.7% (243)	34.0% (151)	2.3% (10)	7.2% (32)	1.8% (8)

Table 3. 15: Attitude towards tobacco control / regulation

Test Statement	Tobacco status	Strongly agree	Agree	Disagree	Strongly disagree	Don't know	χ^2 (p-value)*
More tax	Use	37.2% (16)	16.3% (7)	20.9% (9)	20.9% (9)	4.7% (2)	14.1
	Non-use	54.6% (243)	22.2% (99)	7.4% (33)	11.5% (51)	4.3% (19)	(0.01)
Less tax	Use	18.6% (8)	25.6% (11)	25.6% (11)	27.9% (12)	2.3% (1)	16.0
	Non-use	8.4% (37)	10.7% (47)	27.7% (122)	46.0% (203)	7.3% (32)	(<0.01)
No warnings	Use	11.6% (5)	27.9% (12)	27.9% (12)	20.9% (9)	11.6% (5)	11.3
	Non-use	12.4% (54)	13.1% (57)	36.0% (157)	33.3% (145)	5.3% (23)	(0.02)
Ban smoking in public	Use	25.6% (11)	14.0% (6)	39.5% (17)	14.0% (6)	7.0% (3)	27.4
	Non-use	53.3% (234)	23.0% (101)	14.6% (64)	5.7% (25)	3.4% (15)	(<0.01)
Prohibit sale to women	Use	27.9% (12)	7.0% (3)	32.6% (14)	25.6% (11)	7.0% (3)	34.5
	Non-use	50.9% (222)	23.6% (103)	14.4% (63)	6.7% (29)	4.4% (19)	(<0.01)
Ban tobacco advert	Use	25.6% (11)	16.3% (7)	16.3% (7)	25.6% (11)	16.3% (7)	24.3
	Non-use	45.7% (199)	24.4% (106)	15.9% (69)	7.1% (31)	6.9% (30)	(<0.01)
School education programme	Use	39.5% (17)	44.2% (19)	4.7% (2)	2.3% (1)	7.0% (3)	8.8
	Non-use	57.9% (254)	32.8% (144)	3.9% (17)	3.6% (16)	1.8% (8)	(0.07)
Ban tobacco totally	Use	18.6% (8)	9.3% (4)	32.6% (14)	27.9% (12)	11.6% (5)	81.3
	Non-use	54.4% (236)	28.6% (124)	6.0% (26)	4.6% (20)	6.5% (28)	(<0.01)

*df =4

Table 3. 16: Belief about tobacco

Test Statement	Tobacco status	Agree strongly	Agree	Disagree	Disagree strongly	Don't know	χ^2 (p-value)*
Women who smoke are sick people	Use	9.3% (4)	18.6% (8)	23.2% (10)	11.6% (5)	37.2% (16)	1.13
	Non-use	14.7% (65)	18.3% (81)	22.2% (98)	9.0% (40)	35.7% (158)	0.889
Women who smoke are successful people	Use	7.0% (3)	16.3% (7)	20.9% (9)	23.3% (10)	32.6% (14)	20.3
	Non-use	0.7% (3)	6.8% (30)	33.6% (148)	31.5% (139)	27.4% (121)	<0.001
It is women's right to smoke	Use	18.6% (8)	27.9% (12)	23.2% (10)	16.3% (7)	14.0% (6)	51.4
	Non-use	6.1% (27)	5.4% (24)	37.3% (165)	46.4% (205)	4.8% (21)	<0.001
Smoking a symbol of equality with men	Use	2.3% (1)	16.3% (7)	32.6% (14)	4.7% (2)	32.6% (14)	13.0
	Non-use	0.2% (1)	11.1% (49)	23.3% (103)	26.7% (118)	23.3% (103)	0.007

*df = 4

3.6 Environmental tobacco smoke

Regarding environmental tobacco smoke (ETS), table 3.17 summarises responses to participants' perceived effects of inhalation of second-hand (passive) smoke from people that smoke. More than half of tobacco users (58.1%, n = 25) and three-quarters of non-users of tobacco (82.9%, n = 371) believe that second-hand tobacco smoke is harmful. Environmental (Second-hand) tobacco smoke covers both within the home and outside the home.

Table 3. 17: Passive smoke and harm

Tobacco status	Definitely not	Probably not	Probably yes	Definitely yes	Total
+ (Yes)	11.6% (5)	30.2% (13)	30.2% (13)	27.9% (12)	43
- (No)	3.8% (17)	13.3% (59)	34.0% (151)	48.9% (217)	444
Total	22	72	164	229	487

3.6.1 Exposure to second-hand tobacco smoke

Exposure to second-hand smoke can be from family members and / or friends that smoke, or from colleagues at the work place and from encountering tobacco smoke at gatherings or public places. Figures 3.18 and 3.19 summarise exposure to environmental tobacco smoke within and outside the homes of participants one week prior to the time of survey.

Figure 3.18, shows proportion of respondents (tobacco users and non-users) exposed to tobacco smoke in their homes, whereas figure 3.19 shows exposure to tobacco smoke outside the home. Tobacco users are more exposed to environmental tobacco smoke within [$\chi^2 = 15.21$; df = 4; $p<0.01$] and outside [$\chi^2 = 16.54$; df = 6; $p=0.01$] their homes.

More than sixty percent of non-users of tobacco compared to less than forty percent of tobacco users indicated no exposure to tobacco smoke in their homes. Exposure to tobacco smoke outside the home on the other hand was encountered by over two-thirds of non-users of tobacco and almost eighty-five percent of tobacco users. Also worthy of mention is the fact that five percent of tobacco users and over ten percent of

respondents who do not use tobacco say they were exposed to second-hand tobacco smoke seven days of the week within and outside their homes respectively.

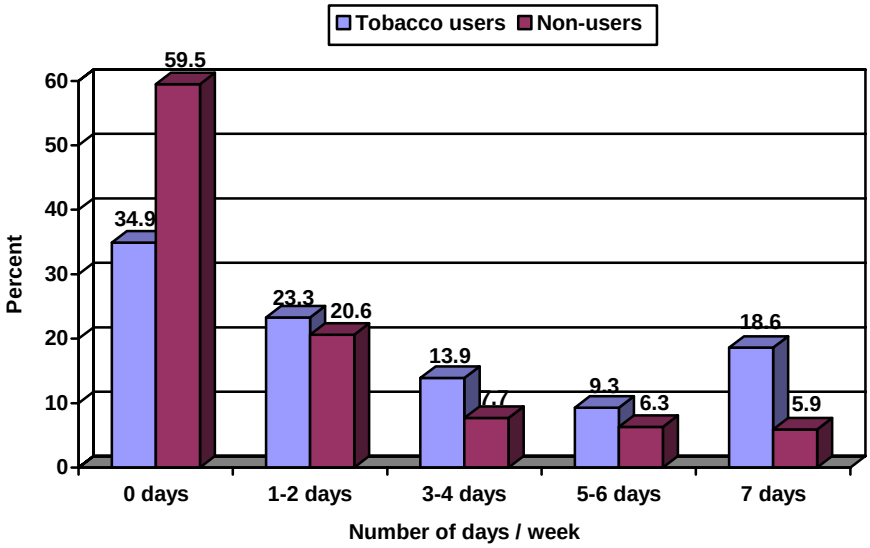


Figure 3.18: Proportion of participants exposed to tobacco smoke within their homes

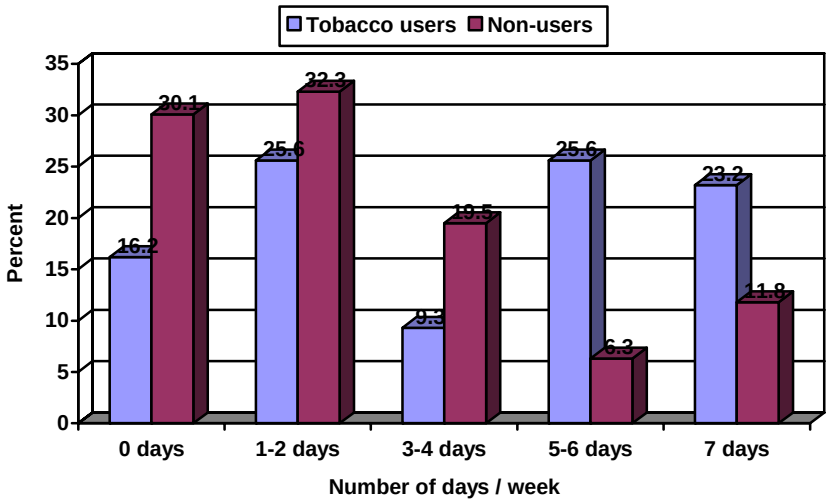


Figure 3.19: Proportion of participants exposed to tobacco smoke outside their homes

4.0 DISCUSSION

Since no previous tobacco use prevalence study has been carried out in Benin City (that has been published), this study highlights many issues that should be of public health concern requiring urgent interventions. The results presented in chapter 3 cover a relatively small geographical area; nevertheless they will add much value to the wealth of local knowledge. Also, this gives insight to issues relating to women and tobacco in Nigeria where data are largely non-existent and based on estimates and projections.

4.1 Prevalence / Pattern

The prevalence of tobacco use among women in Benin City was 8.8% for all forms of tobacco used (smoked (3.3%) and smokeless (5.5%)). This is higher than the WHO national estimate of 1.7% for Nigeria in 1998 [6] but comparable to figures reported for other African countries such as Egypt, Kenya, Tunisia and South Africa at a near equal level of development which ranged from 7% to 12% [2, 8, 9, 28, 37, 40]. Smokeless tobacco (Tabba and Snuff) contributed 62.8% of this prevalence with cigarettes contributing 37.2%. The above result [3.3%] shows a smoking prevalence nearly double that that WHO estimated in 1998. However, the WHO estimate was for the entire country and was not broken down by state and there may have been regional differences. This smoking prevalence among women in Benin City is less than half that of South Africa women quoted at 10.7% for daily and occasional cigarette smoking and the 6.2% prevalence reported for African South African women living in urban areas [38].

The relatively low prevalence of smoked tobacco use may be connected to the role that the society ascribes to women coupled with the cultural restrictions placed on women. As it is among the Xhosa people of South Africa [14], the general population of Benin, does not approve of women smoking. Majority of women that smoke tend to do so in concealed places or with friends who also smoke.

Smokeless tobacco prevalence of 5.5% is less than half that reported among Kenyan women where none smoked was 12% [9]. As it is with cigarettes, smokeless tobacco is equally addictive and etiologically linked with oro-pharyngeal and oesophageal cancers [2, 10]. Attempts at curbing the tobacco epidemic should therefore focus on smokeless tobacco as well as smoking which have hitherto received much more attention, since there is greater acceptability of smokeless tobacco use among women.

Most of the users of tobacco are light users, as more than half, 53.8% smoke four or less sticks of cigarette or use its equivalence of smokeless tobacco per day with 50% reporting that they have used it for one year or less. The few sticks of cigarettes smoked per day may be due to that fact that a large proportion reported using tobacco only at gatherings / parties where they tobacco is readily offered at no cost. This is not the case for tabba where all have used it for more than a year with 42.9% of them using the oral form of snuff for over 20 years. The addictive nature of tobacco may account for the prolonged use combined with the lack of awareness about the health consequences of smokeless tobacco. There are few if any attempts to provide information on the health consequences

of *tabba* (smokeless tobacco) use. As little is said about it, this may create a false sense of safety and continued use.

Educated women with higher socio-economic status according to the Lopez model will be the first to stop tobacco use and the use shifting to the less educated lower women with socio-economic status over time [15, 43, 54].

Smoking was found to be commoner in the younger age group. The age group of 21-30 years accounted for almost sixty percent (56.3%) of female smokers. Smokeless tobacco was more common in the older women age group 71-80, and accounted for three-quarters of *tabba* use. This difference in preference between the young and the old is not statistically significant, but may be indicative of shifting trends. Also the indigenous populations (64.7%) tend to use *tabba* more than migrants. This is in agreement with age group differences as the migrant population is younger and came either to seek employment or study. Migrant women may also be less sensitive to the social norms of the area and this may "free" them to go against the norms. Although religion had no statistically significant relationship with tobacco use, those professing the Christian faith made up 62.8% of people using tobacco. This is reflective of the population distribution of the sample that is to a large extent a Christian community (88.5%). From the analysis, employment status has not shown any influence on tobacco use though it is generally believed that employed people tend to use tobacco more as they have more disposable income [9]. But in the case of this study disposable income may not be linked to

employment status as collecting data on household income was problematic with most participants refusing to answer the question.

4.2 Forms of Tobacco used

Basically, the women of Benin City use tobacco as smoked (Cigarettes) and smokeless (*Tabba* and Snuff). No one reported chewing tobacco or pipe tobacco as reported in Tunisia [4]. The higher prevalence of smokeless tobacco use among the women of Benin City compared with smoked tobacco is similar but lower than values reported for other African states such as 11% for South Africa [40], 12% for Kenya [9], etc. societal acceptance and the little or nothing known about the harmful effects of oral tobacco in the environment may have contributed to this result.

4.3: Onset of tobacco use

4.3.1: Age of Onset

Among women surveyed in Benin City, tobacco use started before their twentieth birthday in 40.7%, with 22.2% of them starting tobacco use before their eighteenth birthday. This is similar to other reports of onset from mid-teen to late teens [6, 18, 29, 30, 39], but varied slightly from the result of a survey carried out on Grade 8-10 learners where 18.5% reported using tobacco before age 10. Teenage tobacco use is a resultant effect of a number of factors that may act alone or in combination with others most notable are peer pressure and exposure to advertising.

4.3.2 Initiation of tobacco use

Tobacco use started early in life among participants, and mostly introduced to it by friends using tobacco (50%). Next in importance is experimentation with tobacco especially when sent to buy it (21.4%). The fact that teenagers and young adults were not refused tobacco when sent to buy them, made tobacco more readily available as form among South African learners [18, 24]. Some started using tobacco out of curiosity (9.5%) with family members introducing 7.1 % of cases.

4.3.3 Maintaining factors

Women's perceptions of why they continued to use tobacco varied. The most prominent is the fact that friends use tobacco in 28.6 % of participants. Friends form part of a social network that tends to initiate and / or maintain tobacco use [18, 30]. Almost half (45.2%) of tobacco users have friends that use tobacco. This finding was statically significant and also in agreement with what was reported in studies in other regions of Africa [18, 20, 30]. Other reasons for using tobacco are family members using it (21.4%), advice from traditional medicine practitioners (14.3%) and to steady nerves (14.3%). Others are to lose weight, relieve stress and boredom and cure illness / toothache contributing 11.9 % each.

4.4: Determinants of tobacco use

4.4.1: Tobacco and education

Tertiary education was a major influence on smoking. Tobacco use (smoking) was directly proportional to educational level attained. This may be due to the effects westernisation resulting in greater interest in education which places educated women at positions of authority. The greater power and access to resources resulting from such positions may wholly or partly explain the use of smoked tobacco among the female 'elites' seen previously as a male habit [40]. Although no prevalence data on men was collected in this study, the low smoking prevalence, low per capita cigarette consumption and absence of smoking related morbidity and mortality among women of Benin City puts them at stage 1 of the tobacco epidemic model of Lopez (et al) [15].

Being a migrant was also associated with cigarette smoking but there was no statistically. Migrants were younger and more educated and preferred smoking to using tabba.

4.4.2 Advertising, promotion and sponsorships

Exposure to tobacco advertising and promotions helps keep the memory of tobacco alive. Tobacco advertising also presents an influential lifestyle that is appealing, the aspiration of all. Whereas almost eighty percent of respondents reported exposure to advertising on billboards and shops alone, over four-fifth of tobacco users reported exposure to same modes of adverting. On the other hand, 32.4 % of survey participants and 42.9 % of tobacco users reported being exposed to one form of sponsorship or the other. Nearly half of tobacco users (47.6%) have souvenirs bearing cigarette labels in their homes whereas, 26.2% of non-users of tobacco have similar souvenirs bearing

cigarette labels. Though billboards advertising tobacco products are common sights, there are specifically no tobacco products or advertising targeting women alone. Limited legislation restricting and / or prohibiting tobacco, and where available, poor means of enforcing them have paved the way for tobacco industries to market their products.

In Nigeria, there is a ban on smoking in public places and provision made in legislation and / or regulations restricting advertising, sponsorship and sales in government buildings. Also there are regulations on health warnings and disclosure of content on packaging but silent on ingredient control in area of maximum nicotine and tar yield [6]. These bans / regulations are poorly enforced if at all. Tobacco companies / products sponsor major events like musical concerts and sporting events (the 2002 edition of Nigerian field and track sporting events that took place in Benin City had a tobacco company as a principal sponsor). Health promotion and education initiatives so far have been through voluntary efforts.

Tobacco advertising has a powerful effect among young people specifically and the public in general. Tobacco promotional activities and introduction of brand advertisement that appeal to young people will increase the initiation and prevalence of tobacco use. Interventions could remedy each identified problem are needed very quickly to prevent tobacco related catastrophe in years to come.

4.4.3 Addiction

Though most of the participants using tobacco were light smokers (user), the addictive nature of nicotine was evident. More than half reported feeling like taking tobacco first thing in the morning and very few could stop the use of tobacco for up to six month (13.6%). With tobacco adverts targeted at women [43] and this level of dependence, anti-tobacco organizations need to wake up to the challenges of averting the threatening epidemic as government being pre-occupied with other health issues may not be aware of the extent of this.

4.4.4 Knowledge, attitude and beliefs

Tobacco users and non-users alike believe that tobacco is addictive and harmful to health, but many tobacco users are not fully aware of the high risks of disease and premature death that their habits can cause. They tend to weigh the perceived benefits of pleasure and avoidance of unpleasant effects of withdrawal far and above the health and financial consequences, more so, when the health consequences take long to appear. This is compounded by the fact that the harmful health effects masquerade as other diseases.

Some (56.4%) tried to stop but failed. This made be due to the addictive nature of tobacco in that it may have been started in the adolescent years given enough room for addiction and dependence. Primary prevention therefore will be most effective in the area of advocacy and personal education. Measures aimed at reducing tobacco use should include education on adverse effects of tobacco and increasing tobacco tax as

87.9% of tobacco users indicated that these and health professionals advice about tobacco will reduce the tendency to pick-up tobacco.

4.5: Environmental tobacco smoke

Another area of public health interest is that of environmental tobacco smoke. Of the sample, 42.8% reported exposure to second-hand smoke within their homes and 71.3% reported the same outside their homes. Majority of the respondents (79.3%) are aware of the danger of second hand smoke. Whereas 81.3% of non-users of tobacco are aware of the dangers of second-hand smoke, 58.1% of tobacco users reported they are aware of the dangers of second-hand smoke to non-smokers (non-tobacco users). The above extrapolates to 4 out of every 10 women being exposed to second hand smoke at home and 7 out of every 10 women at risk of being exposed to second hand smoke outside their homes. With this magnitude of women exposed to second hand smoke, concerted effort from within and outside of government will be required in the process of design, implementation and evaluation of gender sensitive tobacco control programmes. This is bearing on the attitude and beliefs of respondents presented in tables 3.14 and 3.15, and the fact that more women are taking up tobacco prevalence of 8.8% compared with 1% of WHO (1998)).

4.6 Limitations to study

The 1991 population census puts the country's population at 88.5 million, a far cry from today's estimate of nearly 130 million. This must have negatively influenced the

sample size calculation and resultant sample size. Extrapolating to the present day Nigeria should be done with caution therefore.

The traditional (native) Nigeria society frowns at women's use of cigarette (smoked tobacco) and sees nothing wrong with women using smokeless tobacco. Bearing this in mind, it is likely that smoked tobacco may have been under-reported and calculated prevalence less than truly is the case.

The exact impact of tobacco on the household income cannot be estimated from this survey as there was practically no response to questions on socio-economic variables.

5.0 RECOMMENDATIONS

With a large and growing tobacco-related diseases and deaths worldwide, interventions become a necessity. Government will have to take a leading role as tobacco users do not only start young but also do not know the risks of tobacco use. Also, nicotine is addictive. Interventions should restrict people from using tobacco, protect the non-users from environmental smoke inhalation and provide adequate information to make choices. Evidence shows that the best results are achieved when a comprehensive set of measures to reduce the use of tobacco are implemented.

Measures to restrict tobacco use can act either in reducing demand, reducing supply or in combination. The following recommendations will go a long way to reduce the number of women using tobacco:

- **Monetary measure:** taxation is the most cost effective means of reducing demand for tobacco for young people and others with low income that must of necessity be highly responsive to changes in price. Increasing taxes and duties on tobacco and tobacco products will translate to increase in the price that individuals will have to pay for their choices. Higher taxes and resultant higher point of sale prices should induce some smokers to quit and prevent other individuals from starting. This should also reduce the quantity of tobacco consumed by continuing smokers (also among smokeless tobacco users).
  Crop substitution is a measure that can reduce tobacco supply but no demand if farmers are given incentives to grow other crops over and above what they get growing tobacco.

Trade restrictions such as import ban, prominent tax, stamps and local-language warnings on tobacco packs, and aggressive action against smuggling will reduce the abundant supply of tobacco products.

- **Non monetary measures:** these should be put in place side-by-side with the measure aimed at increasing the prices of tobacco products.

    1. **Education:** if smokers are fully informed, rational and under no duress, it can be assumed that the benefits of choosing to use tobacco are at least equal to the costs which they bear themselves. Education therefore should focus on giving clear information on the adverse effects of tobacco. Health warnings on tobacco packages should be large (covering about a third of the surface), clear, in local language and meeting a set of specific required messages such as harm to both men, women and children. Health warnings should go beyond the present message "the federal ministry of health warns that smokers are liable to die young". Information on the adverse health consequences of tobacco use and the benefits of quitting should be widely disseminated. Such information should also include the fact that smokeless tobacco is not a safe alternative to smoking. This will enable people to make informed choices on whether to use tobacco or not and discouraging young people especially from taking up the tobacco habit.
    2. **Legislation / regulations:** tobacco advertisements associate tobacco use (smoking) with independence, healthfulness, adventure-seeking and physical attractiveness. These attractive themes suggest that smoking is a

powerful tool for improving self-image and for the women, smoking equals freedom and gender equality with men. Banning or restricting tobacco advertisement and sponsorship, and sales to young people should be strictly enforced. Policies and regulations should be put in place banning and restriction smoking in schools, workplaces, public transport and all areas open to the public counter-advertising. Ban should also be extended to cover tobacco sponsorship of events, prohibition of promotional items, brand stretching and samples. It is not worth have a law that can not be implemented. Empowering the police and the judiciary to enforce these tobacco restriction laws will go a long way to curtail the excesses of the tobacco companies.

- **Rehabilitation:** tobacco users who want to quit would need help and support. Nicotine addiction makes quitting an up-hill task. The burden of quitting can be reduced substantially through advice from health care providers, toll free telephone quit-lines, support groups and cessation therapies such as nicotine replacement therapy (NRT). Non-prescription sales of NRT will improve access.

- **Monitoring and evaluation:** the effectiveness of a programme is only visible through monitoring. Mechanisms should therefore be put in place to monitor and evaluate anti-tobacco programmes and recommend amendments where inadequacies have been identified.

- **Research:** research on tobacco should be an ongoing process aimed at improving on the knowledge and understanding of tobacco use and devising new treatments and support programme to counter tobacco addition.

6.0: CONCLUSION

Tobacco use among women is an area of public health concern that has been neglected in the midst of a market poised to recruit news users and reduce willingness to quit among current users to secure their trade. The prevalence of tobacco use among women is a warning sign that women are picking up tobacco fast. Smoking is commoner among the younger age group and more educated of the women whilst smokeless tobacco use is largely a habit of the older and less educated women

Two-fifth of women using tobacco in Benin City, Nigeria today started before the age of 20 and was mostly introduced to it by friends who also help maintain the tobacco culture. Though awareness of the adverse effect of tobacco is satisfactory, a lot still need to be done on policy development, implementation and evaluation to restrict the spread of tobacco use thereby safe guarding the future.

The survey also shows that a lot of persons are exposed to tobacco advertising and sponsorship, and environmental tobacco smoke, with little or no anti-tobacco campaigns. This is an indication of weakness in legislation and / or regulations aimed at reducing tobacco usage. Government need to liaise with the voluntary groups speaking against tobacco use to develop comprehensive intervention measures.

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APPENDIX B1: English Questionnaire

QUESTIONNAIRE FOR STANDARDISED INTERVIEW

Questionnaire Number……..

INFORMATION SHEET – STANDARDISED INTERVIEW

Hello, my name is ……., and I am from the School of Public Health at the University of Witwatersrand, Johannesburg, South Africa. I would like to interview you as part of a study to find out how many women use tobacco, what forms of tobacco they use and why they use tobacco. We do hope that the information we get from this research will help the Government and Ministry of Health come up with Policies and Programs that will improve the health of the population in general and women in particular.

We are interviewing women within the household that may or may not have used tobacco. Your participation is entirely voluntary, so you may choose to stop the interview at any time or refuse to answer any question that I may ask you. If you decide not to take part or stop the interview at any time, there will be no negative consequences for you in any way. Whatever answer you give will be treated confidentially and neither your name nor address will appear on the questionnaire.
Subject's name and address will be on a separate sheet and only for quality control. Questionnaires will be identified only with codes

The whole interview should take about 45 minutes
Do you agree to take part in the study?
{If not thank the woman and end the interview}

Date: First visit: ……./2002 Questionnaire completed / Not completed

Second visit:……./2002 Questionnaire completed / Not completed

NB: 1. The second visit becomes necessary if questionnaire could not be completed in the first visit, and for quality assurance.

2. Unless otherwise indicate, the interviewer should read out the options.

Identity page

Name: ……

Address: ……

……..

……..

Telephone (Home): …….

(Work): …….

SOCIO-DEMOGRAPHIC DATA

1. **What was your age on your last birthday? …… Years.**
2. **Which of the following best describe your present marital status? Tick one.**

   [Please read out multiple answers]

   Single (never married) □ Separated □

   Living together □ Divorced □

   Widowed □ Married □

   Married polygamy □

3. **What is the highest education level you attained? Please tick one.**

No formal education	01
Kindergarten / Nursery	02
Primary one	03
Primary two	04
Primary three	05
Primary four	06
Primary five	07
Primary six	08
Class one / JSS 1	09
Class two / JSS2	10
Class three / JSS3	11
Class four / SSS1	12
Class five / SSS2	13
SSS3	14
Diploma / Certificate	15
Degree	16
Post graduate	17

4. What is your predominant employment status? Tick the most correct one.

i. Working full-time □

ii. Working part-time □

iii. Casual work (Occasional) ٱ

iv. Temporary work (Short term) ٱ

v. Unemployed ٱ

vi. Student ٱ

vii. At home by choice ٱ

viii. Pensioner ٱ

ix. Self employed ٱ

x. Others Specify:……

5a. If employed, what is your occupation?

Specify: …….

b. Which of the following best matches your monthly income?

i. < N2,000 ٱ

ii. N2,000-N5,000 ٱ

iii. N5,001-N10,000 ٱ

iv. N10,001-N15,000 ٱ

v. N15,001-N20,000 ٱ

vi. N20,001-N25,000 ٱ

vii. N25,001-N30,000 ٱ

viii. > N30,000 ٱ

6. Do you have any other source(s) of family income? Yes ٱ No ٱ

If yes, how much?

Specify please: ……..

7. Which of the following appliances do you have at home? Tick the applicable option(s).

Pressing Iron ☐
Radio ☐
Television ☐
Telephone ☐
Refrigerator ☐
Microwave oven ☐

8. Which of the following is the main language of communication in your home?

Pigeon English ☐
English ☐
Edo ☐
Others ☐ Specify…….

9. What is your religious affiliation?

Christianity ☐ Specify sect: ……
Ancestral worship ☐
Islam (Muslim) ☐
None / Free thinker ☐
Others ☐ Specify: ……

ASK EVERYONE ATTITUDES / BELIEFS

10. I am going to read you some statements please tell me whether you strongly agree, agree, disagree or strongly disagree with them

Statement	**Strongly agree**	Agree	Don't know	Disagree	**Strongly disagree**
The government should increase tobacco tax					
The government should decrease tobacco tax					
No need for health warnings on cigarette packets					
Ban smoking in public places					
Prohibit sale to women					
Ban tobacco advertising					
Have education program(s) at schools					
Ban tobacco completely					
Smoking while pregnant does not affect the child					
Women using tobacco are mostly sick people					
Women who use tobacco are successful					
It right for women to use tobacco					
Once started, it is difficult to stop					
Tobacco is harmful and should be avoided					
Women using tobacco is a symbol that they can do what men do					

11. Will you recommend cigarettes / tobacco to anyone? Yes ĩ No ĩ Don't know ĩ

Give reason for your answer above:……..

……

……

12. Which of the people below from your neighborhood smoke / use tobacco? Tick the most appropriate one(s).

	1st	2nd	3rd	4th	5th
i. Father	ĩ	ĩ	ĩ	ĩ	ĩ
ii. Mother	ĩ	ĩ	ĩ	ĩ	ĩ
iii. Grandfather	ĩ	ĩ	ĩ	ĩ	ĩ
iv. Grandmother	ĩ	ĩ	ĩ	ĩ	ĩ
v. Brother	ĩ	ĩ	ĩ	ĩ	ĩ
vi. Sister	ĩ	ĩ	ĩ	ĩ	ĩ
vii. Aunts	ĩ	ĩ	ĩ	ĩ	ĩ
viii. Uncles	ĩ	ĩ	ĩ	ĩ	ĩ
ix. Friends	ĩ	ĩ	ĩ	ĩ	ĩ
x. Co-workers	ĩ	ĩ	ĩ	ĩ	ĩ

xi. Others? Specify:……

13. How much of the family income is used for tobacco per week?

Specify please:……...

IDENTIFICATION OF TOBACCO USE and PATTERNS

(Standardized WHO questionnaire)

14. Have you ever smoked / used tobacco? Yes ĩ No ĩ

[If No, please move to question 37 – exposure to environmental tobacco smoke section]

15. Have you ever smoked at least 100 cigarettes or used five tins/bags of snuff [FIND LOCAL WORD FOR SNUFF IF USED IN THAT AREA] in your lifetime?

Yes ĩ No ĩ

16. Have you ever smoked / used tobacco daily? Yes ٱ No ٱ

17. Do you now smoke / use tobacco? Indicate category, please.

Daily ٱ
Occasionally ٱ
Not at all ٱ

18. How many years have / did you use tobacco daily? (Ask only daily users of tobacco)

Specify years: …….

19. On average, what number / quantity of the following items do / did you use in the last one month? Specify please.

i. Cigarettes ٱ How many?_____
ii. Pipes ٱ How many?_____
iii. Snuff ٱ How many tins?_____
iv. Tabba ٱ How much?_____
v. Cigars ٱ How many?_____
vi. Others ٱ Specify: …….

20. How much do you usually pay for a pack of 20 cigarettes?

i. I don't smoke
ii. I don't buy cigarettes / or don't buy them in packs
iii. N10 [make sure these are in line with actual costs]
iv. N20
v. N30
vi. N50
vii. N70
viii. N100

21. Do you ever have a cigarette or feel like having a cigarette / using tobacco first thing in the morning?

i. I no longer smoke cigarettes / used tobacco
ii. I don't have or feel like having a cigarette / using tobacco first thing in the morning
iii. Yes, I sometimes have or feel like having a cigarette / using tobacco first thing in the morning
iv. Yes, I always have or feel like having a cigarette / using tobacco first thing in the morning

22. If you have stopped using tobacco, how long has it been since you last smoked / used tobacco?

i. Less than one month ٱ
ii. One month to less than six months ٱ
iii. Six months to less than one year ٱ
iv. One year to less than five years ٱ
v. Five years to less than ten years ٱ
vi. Ten years and longer ٱ

23. If you smoke / use tobacco, at what age did you start using tobacco?

Please specify age:…….

24. Usually, at which place(s) do you smoke / use tobacco?

i. Alone yes ٱ no ٱ
ii. With family yes ٱ no ٱ
iii. At school yes ٱ no ٱ
iv. At work yes ٱ no ٱ
v. At gatherings yes ٱ no ٱ
vi. Others, please specify:……

25. Is there any place that you would not like to smoke / use tobacco?

Yes ٱ No ٱ

If the answer to above is yes, please specify where:……..

26. How did you start smoking / using tobacco? [Do not read out options – tick only if mentioned] Mark 1st mention, 2nd mention etc

i. Introduced to it by a family member Í Í Í Í Í

Specify whom:…….

ii. Introduced to it by a friend Í Í Í Í Í

iii. Tried it when sent to buy it Í Í Í Í Í

iv. Prescribed by a herbalist Í Í Í Í Í

v. Out of curiosity Í Í Í Í Í

vi. To relieve headache Í Í Í Í Í

vii I thought it looked "cool" Í Í Í Í

ix. Others? Please specify:…….

27. Which of the following best describes why you smoke / use tobacco? [Do not read out options. Tick as subject gives reasons in the order of mention.]

	1st	2nd	3rd	4th	5th
i. Because my friends use it	Í	Í	Í	Í	Í
ii. Because family members use it	Í	Í	Í	Í	Í
iii. Asked to by a herbalist	Í	Í	Í	Í	Í
iv. To steady my nerves / feel cool	Í	Í	Í	Í	Í
v. To relieve stress	Í	Í	Í	Í	Í
vi. It gives courage to interact	Í	Í	Í	Í	Í
vii. To forget problems	Í	Í	Í	Í	Í
viii. To cope with work pressures	Í	Í	Í	Í	Í
ix. To control / loose weight	Í	Í	Í	Í	Í

x. To cure sickness, please specify:…….

xi. Others? Please specify:……

28. What do you enjoy most smoking / using tobacco?

Please specify:……..

……..

……..

29. What do you hate most about smoking / using tobacco? [Do not read options out but tick in the sequence of subject mentioning reasons, please.]

	1st	2nd	3rd	4th	5th
i. Causes one to sneeze	☐	☐	☐	☐	☐
ii. Makes you cough	☐	☐	☐	☐	☐
iii. Causes catarrh	☐	☐	☐	☐	☐
iv. Makes you smell / dirty	☐	☐	☐	☐	☐
v. You feel sick without it	☐	☐	☐	☐	☐
vi. It stains your teeth	☐	☐	☐	☐	☐

vii. Others? Please specify:…….

……

30. Have you at any time tried to stop smoking / the use of tobacco?

Yes ☐ No ☐ Can't remember ☐

If yes, for how long did you stop, specify please?…….

How would you describe the experience of being without tobacco?

Easy 1 2 3 4 5 6 7 8 9 10 Hard

31.Which of the following best describe why you tried to stop smoking / using tobacco? Do not read out Tick sequentially as subject indicates reasons.

	1st	2nd	3rd	4th	5th
i. The health warnings	☐	☐	☐	☐	☐
ii. Heard that it is dangerous to health	☐	☐	☐	☐	☐
iii. Advised by family members to	☐	☐	☐	☐	☐
iv. Doctors' advice	☐	☐	☐	☐	☐
v. I was pregnant	☐	☐	☐	☐	☐
Advised by friends	☐	☐	☐	☐	☐
vi. It affects me badly	☐	☐	☐	☐	☐
vii. Advised by Quitters	☐	☐	☐	☐	☐
viii. Advised by Religious leader	☐	☐	☐	☐	☐

ix. Others? Please specify:…….

32. Do you still want to stop smoking / using tobacco?

Most certainly 1 2 3 4 5 6 7 8 9 10 Most certainly not

33. Would you say that in five years from now, you will most certainly smoke / use tobacco:

Yes ĩ No ĩ Don't know ĩ

34.Which of the following will make you stop smoking / using tobacco? [Do not read out Tick the sequence of mention.]

	1st	2nd	3rd	4th	5th
i. Adverse effect on my health	ĩ	ĩ	ĩ	ĩ	ĩ
ii. Feeling less of its effects	ĩ	ĩ	ĩ	ĩ	ĩ
iii. Advice of family	ĩ	ĩ	ĩ	ĩ	ĩ
iv. Increase in price	ĩ	ĩ	ĩ	ĩ	ĩ
v. Health professionals' advice	ĩ	ĩ	ĩ	ĩ	ĩ
vi. if I was pregnant	ĩ	ĩ	ĩ	ĩ	ĩ

Others, specify please:……

35. Where would you go for help if you want to stop smoking / using tobacco?

	1st	2nd	3rd	4th	5th
i. A friend	ĩ	ĩ	ĩ	ĩ	ĩ
ii. Health worker	ĩ	ĩ	ĩ	ĩ	ĩ
iii. Family member	ĩ	ĩ	ĩ	ĩ	ĩ
iv. Religious leader	ĩ	ĩ	ĩ	ĩ	ĩ

v. Others, please specify:…….

36. If you eventually stop smoking / using tobacco, can you think of any reason(s) why you may use tobacco again?

Yes ĩ No ĩ Don't know ĩ

If yes, why:……

……..

ASK EVERYONE EXPOSURE TO ENVIRONMENTAL TOBACCO SMOKE

37. Do you think the smoke from other people's cigarettes is harmful? [Read out options]

i. Definitely not
ii. Probably not
iii. Probably yes
iv. Definitely yes

38. During the past seven (7) days, on how many days have people smoked in your presence in your home?

i. 0
ii. 1 to 2
iii. 3 to 4
iv. 5 to 6
v. 7

39. During the past seven (7) days, on how many days have people smoked in your presence in places other than your home?

i. 0
ii. 1 to 2
iii. 3 to 4
iv. 5 to 6
v. 7

ASK EVERYONE: EFFECTS OF MARKETING / ADVERTISING

40. What tobacco brands have you seen advertised in the past six months?

List: ……...

……

41. Where did you see the advertisement? Tick mentioned option(s).

	1st	2nd	3rd	4th	5th
Billboard(s)	Î	Î	Î	Î	Î
Magazine(s)	Î	Î	Î	Î	Î
Newspaper(s)	Î	Î	Î	Î	Î
TV	Î	Î	Î	Î	Î
Radio	Î	Î	Î	Î	Î
In shop(s)	Î	Î	Î	Î	Î
Other	Î	Î	Î	Î	Î

42. Do you recall seeing any music / sports or other events sponsored by tobacco?

Yes ٱ

No ٱ

Don't know ٱ

If yes, what brand of tobacco / cigarette? ……

And, what event(s):……..

43. Do you recall a beauty contest / fashion show sponsored by tobacco?

Yes ٱ

No ٱ

Don't know ٱ

If yes, what brand of tobacco / cigarette? ……

And, what event(s):……

44. On which of these products do you remember seeing health warnings?

	1st	2nd	3rd	4th	5th
i. Cigarettes	ٱ	ٱ	ٱ	ٱ	ٱ
ii. Snuff box	ٱ	ٱ	ٱ	ٱ	ٱ
iii. Tabba	ٱ	ٱ	ٱ	ٱ	ٱ
iv. Beer bottle	ٱ	ٱ	ٱ	ٱ	ٱ

v. Others? Specify:……

45. When you watch TV, Videos or Movies, how often do you see an actor / actress smoke / use tobacco?

i. I never watch TV, Videos or Movies

ii. Sometimes

iii. A lot

iv. Never

46. Do you have something (t-shirt, pen, backpack, etc.) with a cigarette label on it?

i. Yes

ii. No

47. During the past 30 days (one month), how many ANTI-SMOKING campaign(s) / program(s) on TV, radio, billboards, newspapers, magazines, etc., have you seen?

i. None
ii. A few
iii. A lot

End of questions. Thank you very much for participating.

APPENDIX B2: Edo Questionnaire

INOTA NA YA NE OMWAN OTA

Enoba oghe inota.....

EBE NA – YA YE-EMWEN HO – OMWAN HO-KPATAKI

Koyor, enimwen ke-ghi-er....., owe-oghr ebe Public Health vbe owe-be noyose, Johannesburg, South Africa. I ho ni nen ota vbe kpia inu-Ikhuo no-sie esiga da rue esiga ne iria se. Ma ya – yi we inota – na gha rie Iyobo ne Airioba oghe egberanwen no la-dia vbe uwe aton-mu oghe evbo-hoho keevbe Ikhuo ka-te ka-te.

Ma nor ikhuo ota vbe da-de owa na-na sie itaba kevbe na-ma na-sie. Ekhoie wue eru khian ya rie-egbe yo, ogha khon-wen do-bor oghe inota yi vbe eghe ke ghe. Vbe nughi khian na ghi no-ta, ne Ighia te nor – wen. D ghu-ma hi-ho nu-rie ewan-ne ye inota eghe hia. Ewina-ne nu re yo-hia lodan vbe new en ke vbe owa nu ye.

Eghe nukhian yayenmwen yauie inota gharie isenyan iyeva?

We ho nu kharie opa vbeuwi Iwiemwina?

{De ghe rerio ponmwen nokhuo nudobe inotanayi}

Edenogkin: Otuenokaro...../2002
Edenupogieva...../2002

NB: 1 Otuenupogieva kheke deghe ivonota mana non fo vbedo kao
2. Nomiekenaenwere owiase.

Ediohi pagi

Eyi meu.....

Owha men.....

Telephone.....

Iwhina.....

1. Dinuponuye vbe ede nurie Edubemwen rie?.....Nokiekie

2. Deno gha setin gie Edegbon oghe oromwen vkuwe enena? Vie marki yo

Tierie ladian ewanien no re vbe we opa (wemaherie okguo) □

Tuwagbakoko ro	□	Jwasegberare	□
Odafuon wmune a	□	Ra wasegberahe	□
Tuwanovu gba romwondo	□	Uro mwondo	□

3. De owebe noyose ne itiebe se. Lahor vien omaya.

Imayowebe	01
Iwebe oghe Igai	02
Owebe nokaw orrieughuebe opa	03
Owebe nogieva	04
Owebe nogieha	05
Owebe nogiene	06
Owebe nogisen	07
Owebe nogiehan	08
Owebe noyo opa	09
Owebe noyo eve	10
Owebe ha JSS 3	11
Owebe nen SSS 1	12
Owebe isen SSS 2	13
SSS 3 Eha	14
Ediploma	15
A degree	16
A postgraduate	17

4. Da iwhina nu whina

Iwhina edegbedegbe	□
Iwhina igbenso	□
Iwhina ehe eso	□
Iwhina ehe eso	□
Ima whina	□
Owa ebe me yo	□
Owa men iyaa	□
I fo iwhina ne	□
Iwhina obo me I whina	□
Nikee	□

5a. Du mwen Iwhina, de no khin

Ta.....

5b. Iniho whe me

I. < N 2,000 □
II. N 2000 – N 5000 □
III. N 5000 – N 10 000 □
IV. N10 000 – N 15 000 □
V. N15 000 – N 20 000 □
VI. N20 000 – N 25 000 □
VII. N 25 000 – N30 0000 □
VIII. > N30 000 □

6. U mwen Iwhina owhe no rhino gu we a? Eeh □ Eoh □

De eeh no iniho? Ta…….

7. Inu emwin-na hia we mwen vbe owa gbon-la-dan

i. Emwin nay a lo-kpon □
ii. Ekpetin – ota □
iii. Ekpetin – ukhe □
iv. Efrige □
v. Uwa ya nay a guan □
vi. Emwin na ya – ran mwin □

8. De vbo nu ze vbe owa?

Ebo no – ma gba □
Ebo no – gba se □
Edo no ze □
Evbo vbe-he □ Gie – re, Ta……

9. De mwan nu ga

Iyayi ohosa □
Erimwin nag a □
Emole □
Eba – min – ro □
Ovbe – he □ Gie – re, Ta.....

NO EMWAN – HIA USINMWEN/ VBIYAYI

10. I khan tie emwen eso ma-unie la-ho gu-mwen-ren de-hu kue-yo se, de-khu-gbo-dan-yo

Emwinu –nu	**Kue –yo Se-se**	**Kue-yo**	**Ima –ren**	**Ikue**	**Ikue he-he**
No – gie-nebo fian yan itaba					
No – gie – nebo fian hie itaba re					
A ghi gbu-hi ye a khue itaba					
Gbu – hi ye itaba na si vbo – erhia					
Ni khuo ghe khion					
Gbu – hi yu tam won en					
Na ghia ma emwan – re vbe owe-be					
Gbu – hi – yo fe fe fe					
Ema ne okhuo no han mwan					
Itaba ye ikhuo mwen eman mwen					
Ikhuo no se-taba mwen a ton-mu					
Oman e ikhuo lue – itaba					
Agha sen-ne oke he iogho na se –ria					
Itaba se olo-gho-mwan le-ne					
O re ma we ikhuo no si-taba gha me-tin, rue mwin ne ikpia ru.					

11. We gha gie itaba na si ma omwan? Hen □ ra heo □ ima ren □
Re-wan nen ye inota na……..
……
……

12. Da – arve mwan na gben vbo-to-to ni le garue ni sie ra ni yi-itaba rue emwin? Suokpa nu-ren (vbo)

	Okpa	**Eva**	**Ehia**	**Eren**	**Isen**
i. Erha	□	□	□	□	□
ii.Iyine	□	□	□	□	□
iii. Erha no kha	□	□	□	□	□
iv. Iyve no kha	□	□	□	□	□
v. Otun no kpia	□	□	□	□	□
vi. Otun no khuo	□	□	□	□	□
vii. Otee rha no khuo	□	□	□	□	□
viii. Otie rha no kpai	□	□	□	□	□
ix. Ose – rue	□	□	□	□	□
x Nu wa gba mwin na	□	□	□	□	□

xi. O vbe he de no khi …….

13. Inu igho egbe rue eru lo yi taba vbu zola?
Gbun lahor……

YE ERO INU ITABA NA LO KE VBE NO YE HE

(A vba no ota na)

14. We ka se itaba ra uvbe ya rue emwin? Hen □ Ra hen □
[Ukha, we hen gbera ghi no-ta ihron yan ogban – ye ehe na na sie itaba la dian]

15. We es-sie itaba iyi-sen ra ukpu koko isen [YE EMWEN NO KHO YA GBON] vbe no ye rue? Hen □ Hen ro □

16. We ka sie de Hen □ Hen ro □

17. We sie nia/ulue itaba de-he ner khi, la ho
Edegbegbe □
Ugben so □
Usi he-hie □

18. Inu-ukpo ya sie ede-gbe-gbe? (Ya no emwan ni sie taba)

Gbin enu-kpo no khi……..

19. Hia ne ugbon kpa vbe usun na hia/ne ulokeke vbu wu-kio kpa no gbe ra?

Te no khi lahor

i. Egboho □ Inu – no?.....
ii. Ukoko □ Inu – no?.....
iii. Tabi-hue □ Inu – no?.....
iv. Itaba □ Inu – no?.....
v. Evba sie □ Inu - no?.....
vi. Ovbe he □ watase…….

20. Ini-gho nu-hi-ye ikpe egboho ugie

i. Igue sie □
ii. Men – de egboho □
iii. Ikpen –sen □
iv. Ikpen –gbe □
v. Ikpen – kesu-gie □
vi. Ikpen – sen yan ugie □
vii. Ikpen – sen yan-gban □
viii. Ikpen – yi – sen □

21. We ka mwen egboho ra urho-nu gha mwen/no gha re-mwin okao nu-lo vbo wie?

i. Me ghi sie egboho □
ii. I mwen ra I vbe ho-ni gha mwen ra no vbe gha re-mwen okoro men vbo-wie □
iii. Hen, I mwen ugben-so ra iho-ni gha-mwen nor vbe gha re-mwan okoro vbo-wie
iv. Hen, eghe hia I mwon-en ra o ni gha mwen egboho ra nor gha rie emwin okoro ni-lo vbo-wie. □

22. A de-ghu ban egboho vbo ghi kpe-se-he ne u- ghi sie?

i. Ode vbe nu-ki okpa ye □
ii. Uki okpa ra odu-kie-ha □
iii. Uki ehia ra ode-ukpo-kpa □
iv. Ukpo – okpa ra odi-kpi sen □
v. Ukpo – esen ra odu-kpi-gbe □
vi. Ukpo-igbe ra okpe-so ni □

23. A-deghu sie egboho odi-nu-kpo ye uke sune

Laho inu-kpo……

24. Vbe ghe de-ehe nu-na sie egboho?

i)Wo –kpa Hen □ Henho □
ii)Ke-vbe egbe Hen □ Henho □
iii)Vbo-we-be Hen □ Henho □
iv)Vbi-si mwina Hen □ Henho □
v)Vba –si koko Hen □ Henho □
vi)Vbe – ho vbe.....

25. Ehe ro ne una ho nu-sie egboho Hen □ Henho □

Ehe-gha ro, laho te-ehe no-khi.....

26. Vbua ya suen egboho na si-he

		Okpa	Eva	Ehia	Eren	Isen
i.	Oten vbu we-gba	□	□	□	□	□
ii.	To-mwan no khi	□	□	□	□	□
iii.	Lo-bo se no ria	□	□	□	□	□
iv.	Vha-gio una da mwon	□	□	□	□	□
v.	Obo gie ma une	□	□	□	□	□
vi.	Ihia-ro no ria	□	□	□	□	□
vii.	Nor da-fie-ra yi	□	□	□	□	□
viii.	I te-wo-fure					
ix.	Ovbhe? Laho gbon.....					

27.Vbo se nu-na sie egboho?

		Okpa	Eva	Ehia	Eren	Isen
i.	Runmwude ose ve sie	□	□	□	□	□
i.	Runmwude oten ubu-we gbe	□	□	□	□	□
ii.	Tu-ya nor obo khu-mwu	□	□	□	□	□
iii.	No fue-gbe re	□	□	□	□	□
iv.	Runmwude gbe wo-mwen	□	□	□	□	□
v.	No rie gio-du re	□	□	□	□	□
vi.	Y mia – me ologho-mwan	□	□	□	□	□
vii.	Nu-sutin wina	□	□	□	□	□
viii.	Na ya mwen – tin	□	□	□	□	□
ix.	No ya gbe emia-mwen.....					
x.	Ovbe – he? Laho gbon.....					

28. Vbo ren-ren une na sie?

Laho ta-se.....
.....
.....

29. De mwin no sono vbo na si?

		Okpa	Eva	Ehia	Eren	Isen
i.	O-yo mwan ti-ihi	□	□	□	□	□
ii.	O-yo mwan to –lo – hen	□	□	□	□	□
iii.	vbe se ohia	□	□	□	□	□
iv.	O-yo mwan wia	□	□	□	□	□
v.	O-vbe si –ema mwan	□	□	□	□	□
vi.	O-vbe ya akon gbi umen	□	□	□	□	□
vii.	Ovbe he hia? Laho ta.....					

30. We te gha ho nu do-bo egboho na se yi ria? Hen □ Henho □
I ghi ye – re a-de ghe hen, vbo kpe se he?.....
Ge vbe no ye he vbe ehe na ma ya sie?

O ze-ye 1 2 3 4 5 6 7 8 9 10 ra O-lo gho

31. Vbua hia ya gie emwin no se nu na ho nu se ria

		Okpa	Eva	Ehia	Eren	Isen
i.	Ibu-de gbe-riamwen	□	□	□		
ii.	U-hor ghe ma ne egbe	□	□	□		
iii.	Ibu-de vbe uwe-gbe	□	□	□		
iv.	Ibu-de obo-ebo	□	□	□		
v.	Runmwude I hia-mwan ibu-de					
vi.	vbo-bo se	□	□	□		
vii.	E-ma men hie-hie	□	□	□		
viii.	Ibu-de erie	□	□	□		
ix.	Ibu-de ohe vbo-owosa	□	□	□		
x.	Ovbe he hia? Laho ta se.....					

32. We ye ho nu se itaba ria na sie?

Ka-ka-bo 1 2 3 4 5 6 7 8 9 10 U-gha he

33. Vbi-kpi sen no-de ugba vbe rio, we tu gba ye sie egboho

Hen □ Henho □ Ima –ren □

34. Do kpa vbe vba no-gha ya se itaba iria

		Okpa	Eva	Ehia	Eren	Isen
i.	gha ria mwen gbe ranmwen	□	□	□	□	
ii.	I ghi hen emwon ese	□	□	□	□	
iii.	Ibu-de oghe egbe	□	□	□	□	
iv.	Tor ghi wa ghan	□	□	□	□	
v.	Ibu-de oghe owe gbe ranmwen	□	□	□	□	
vi.	A-de ghi gha han mwan	□	□	□	□	
vii.	Ovbe-he hia ta laho.....					

35. Vbua na ho nen inaruiyobo ade ghe unaho nu rue iyobo nu ya dobo esiga yi o e nu dubo evba ni sitaba yi?

		Okpa	Eva	Ehia	Eren	Isen
i.	Ose	□	□	□	□	□
ii.	Omwan nowina vbe owe-gbe ranmwen	□	□	□	□	□
iii.	Egbe	□	□	□	□	□
iv.	Eniwanen oghe otuna ga	□	□	□	□	□
v.	Nikere, laho denokpi.....					

36. Deghe wenaghidobe itaba o ra e siga yi? We gha ye oe evbi no sie nu we nan werie gba si esiga oe itaba

Enn □ Eoo □ Ima een □

Deghe enn vbosie?.....

.....

NON EVBAN HIA YAWEWE VBE EDOGBONUYE ITABANASI

37. We ya yi werie esiga ne ovban si oghasetin muon mwan rian ra? [Tie ladia zopa]

i. Ero □
ii. Uraghe □
iii. Uraghe eenon □
iv. Ere non □

38. Ke upo ihio nogbera (7) ghade inue mie evbn ni si-esiga mwe esira mwie, mwe owa nu ye?

i. 0 □
ii. Opa ya se eva □
iii. Eha ya se enen □
iv. Isen ya se ehan □
v. Ihion □

39. Ke ipede ihiio ne ogbera unu ede ovban he si esiga vbe odaromwe? O a vbe orere vbe nenare owa rue?

vi. 0 □
vii. Opa ya se eva □
viii. Eha ya se enen □
ix. Isen ya se ehan □
x. Ihion □

NO EVBAN HIA

40. De arie itaba o a esiga numiw were aya wewe vbe ulere han nogbera?

Gbon en.....
.....

41. De ke ne una mien aya wew?

		Okpa	**Eva**	**Ehia**	**Eren**	**Isen**
i.	Esanbod	□	□	□	□	□
ii.	Ema gazen	□	□	□	□	□
	Ivews pepper	□	□	□	□	□
iii.	ETV	□	□	□	□	□
iv.	Radio	□	□	□	□	□
v.	E shob	□	□	□	□	□
vi.	Uhomwehe.....					

42. Uyere amwa m s huan ra e mwa ni rule ra ewmwa mwehe mwerio ne emwa nisita ba ze ighona ya yorobo ra?

Een □
Eoo □
Imarien □

A deghe een, de aruen itaba nokhin mwo?.....
O e esiga o e dawie nokhin.....

43. U yere eba ga itaba lef a roe?

Een □
Eoo □
Imarien □

A deghe een, de aruen itaba nokhin mwo?.....
O e esiga o e dawie nokhin.....

44. Vbua hia ya gie emwin no se nu na ho nu gbona gie?

Esiga □
Tabi-hue □
Itaba □
Evba sie □
Ovbe he hia? Laho ta se.....

45. U yere eba ga vbe ghia itaba lulia?

Usi he-hie TV □
Uraghe eenon □
E gbotie □
Usi he □

46. We ye ho nu se (mwen hue, ibiro, duoreto) itaba ria na sie?

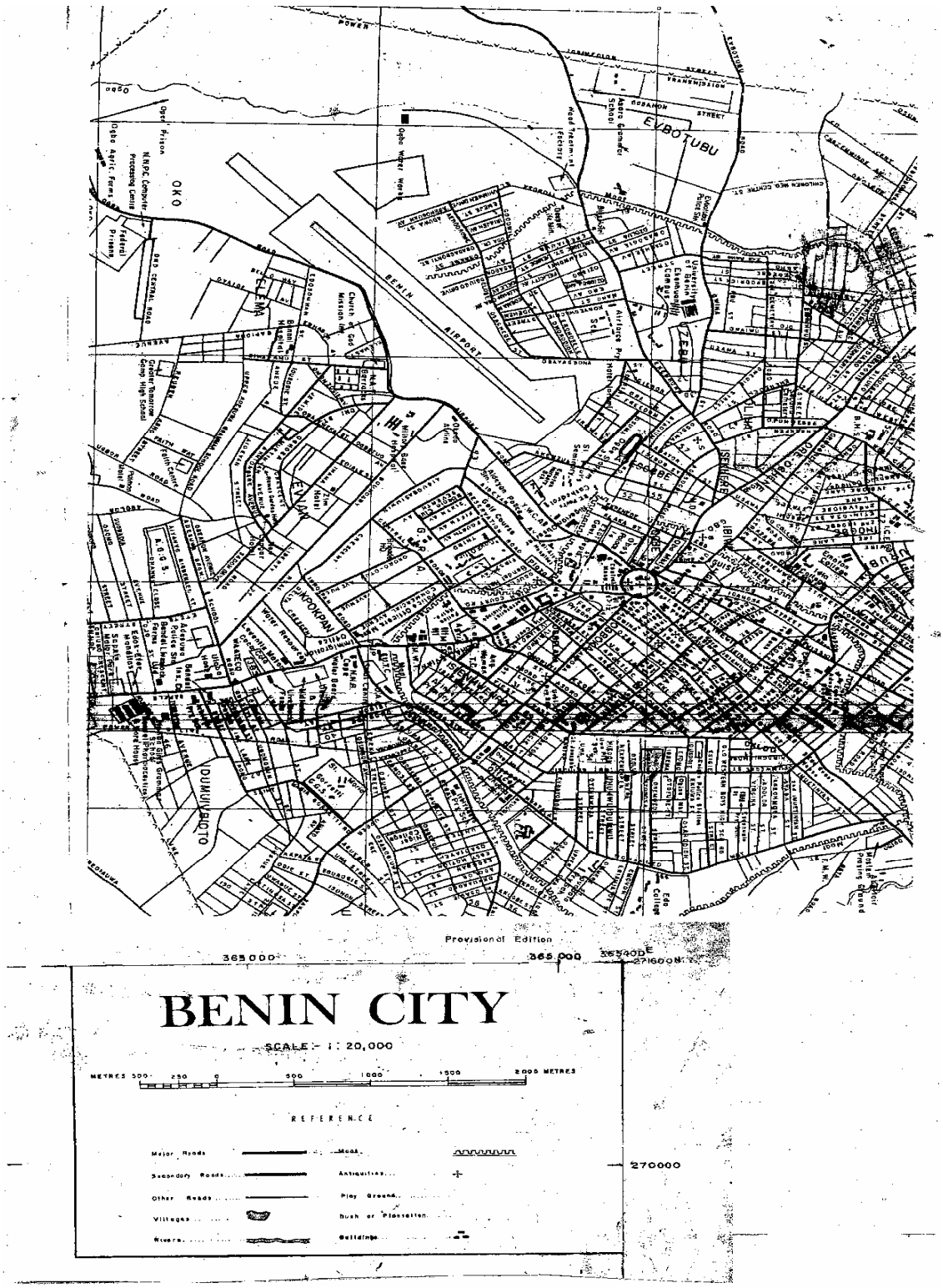
i. Een
ii. Eoo

47. Ke upo ihio ehia tugba (30), ghade inue mie itaba iyobo nu ya dobo esiga yi o e nu dubo evba ni sitaba yi?

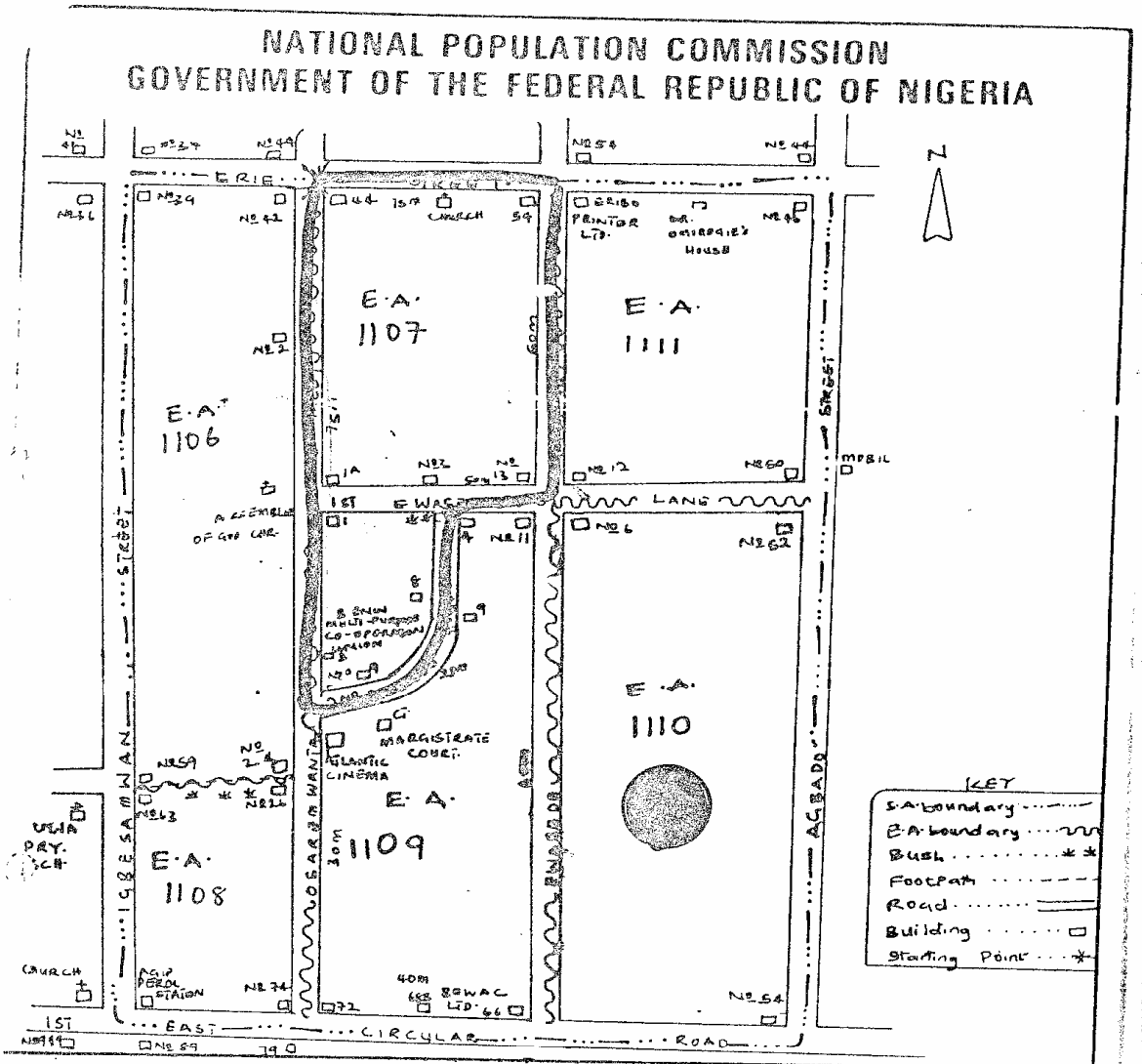
i. Eba – min
ii. O hue ne
iii. E gbotie

******Inota fo ne. We se ka ka bo.******

Appendix C1: Site map of Benin City



Appendix C2: EA sketch map (sample)



Appendix C3: House numbering form

S/NO OF BUILDING	ADDRESS OF BUILDING OR OWNER OF BUILDING	PURPOSE OF WHICH BUILDING IS USED 1 = RESIDENTIAL 2 = COMMERCIAL 3 = SOCIAL FUNCTIONS 4 = UNOCCUPIED 5 = UNCOMPLETED	S/NO OF HOUSEHOLD	NAME OF HEAD OF HOUSEHOLD

Appendix C4: Household listing form

