

**ASSESSING AND EXPLAINING USE OF TOBACCO
AMONG PRIMARY SCHOOL PUPILS IN
KITUI CENTRAL DIVISION,
KITUI DISTRICT**

**UNIVERSITY OF NAIROBI
EAST AFRICANA COLLECTION**

BY

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PART FULFILMENT FOR THE DEGREE OF
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Declaration

This research project is my original work and has not been presented for a degree in any other university.

Naomi

Kathula Naomi Dominiter

This project has been submitted for examination with my approval as university supervisor.

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Dedication

This study is dedicated to my husband Musyoka and our sons Kitheka and Muthui. The most important people in my world.

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The road to the finalisation of this research has been long and often hard. It has nevertheless been a most enjoyable and enriching experience. Many people have contributed towards its success in one way or another. It is impossible to mention everyone. To all those who offered help, please know that I will be forever grateful.

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Many thanks goes to my husband Dr. Mwinzi for his financial assistance, his continuous encouragement and his co-operation during the time I was writing this project paper.

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To teachers who were willing to reschedule their lessons to allow me to collect data and to pupils without whom there would be no project.

God bless you all.

Abstract

This study was about assessing and explaining use of tobacco among primary school pupils. The major purpose was to determine the level of and factors associated with initiation and current use of tobacco among primary school pupils. The overall and long term aim of this study was to contribute to the Improvement of the health of the pupil of Kenya. It was also expected to contribute information that could be useful in designing preventive strategies against tobacco use in Kenya particularly on the development of a healthy lifestyle among the youth. The specific objectives of this study were to determine the prevalence and distribution of use of tobacco products in relation to socio-demographic characteristics among primary school pupils in Kitui Central Division, Kitui District. Secondly to assess the level of exposure to pro and anti tobacco messages, sources of information, risk awareness, attitudes and perceived behaviours as related to use of tobacco among primary school pupils in Kitui Central Division, Kitui District.

The setting for this study was ten primary schools in Kitui Central Division.

The method used for this study was a questionnaire which was administered to 470 primary school pupils aged 13 to 15 years under supervision in the classroom. An atmosphere of confidentiality was maintained at all times to enable the pupils to answer freely. Teachers were not allowed into the pupils' classrooms during the exercise, and the sitting arrangements, as far as possible, ensured privacy to the participants. Prevalence estimates of lifetime smoking and use of smokeless tobacco were calculated using frequencies and

percentages. Reasons for tobacco use, knowledge of tobacco related health risks, sources of information on tobacco health risks and advertising were calculated using frequencies and percentages and histograms were drawn for them.

Behaviour experienced by smoking pupils, exposure and attitudes towards tobacco growing were assessed by calculating proportions.

The results obtained from this study were that a total of 14% had experimented with tobacco, 7% with smoking and 7% with smokeless tobacco. The pupils reported that their teachers, relatives, fathers, friends, and other pupils in their school used tobacco.

The reported age of onset was 14 years and younger.

Major reasons for tobacco use was peer pressure followed by lack of parental guidance, curiosity, free exposure to tobacco, lack of information on tobacco, advertisements, adventurism, boredom, frustration, pressure from school work and rebellion. More than 60 % of the pupils were aware of tobacco related ill health. This was because they admitted that tobacco causes social ill health, diseases and disorders. Tobacco also affects the following; personal hygiene, mental health, pupils' morality, family health, academic performance, unborn babies and reduces endurance to exercise and physical fitness.

The most prevalent sources of health risk information were teachers (81%), followed by parents and mass media each (77%), church leaders and books/magazine or billboards each (72%), grandparents and others. Large majority had seen or heard a tobacco advertisement (88%).

The pupil's attitude towards behaviours experienced by smoking pupils were negative. This was because they reported smoking pupils were disobedient to teachers, did not attend school regularly, did not finish assignment given by teachers, performed very poor academically, were violent and withdrawn to other pupils, complaints were brought by parents and community about them and generally they appeared with bulging red eyes, very shabby and untidy.

Their attitudes towards tobacco regulatory policies were positive. They reported that smoking was not allowed in schools, pupils were not allowed to smoke, smoking was not allowed in public places, pupils found smoking in schools were expelled and cigarettes were not sold to people below 18 years.

Tobacco growing was significantly associated with tobacco use by pupils (59%) but their intention to grow tobacco in future were negative (10%). As for tobacco benefits by the growing families, they mostly responded negative. This was because they reported it affects their pupils negatively, had a lot of money after sale, had no enough food for their family, did not know the dangers of tobacco growing, did not have the best crop for their farm and had no enough firewood from their farm.

In Conclusion the proportion of primary schools pupils use of tobacco was high (31%) in Kitui Central Division, probably because tobacco was grown in the area and also due to wide exposure to advertisement from tobacco sales representatives, who frequently tour the district.

This calls for discouragement of tobacco growing in the division.

Advertising can be removed by banning all forms of tobacco promotion to young people particularly withdrawal of games and sport support by tobacco companies.

Pupils are mostly influenced by peers and mass media and receive health related information from a variety of sources but mostly from the teachers hence this calls for teachers to be trained in guidance and counseling in order to handle this crisis. The curriculum developers, Kenya Institute of Education should include this topic on tobacco use as early as lower classes in primary level of education and equip the teachers with adequate teaching aids.

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LIST OF ABBREVIATIONS

A.R.H.P	Association of Reproductive Health Professionals.
B.A.T.	British American Tobacco
D.H.H.S	Department of Health and Human Services
I.D.R.C.	International Disease Research Centre
S.P.S.S	Statistical Package for Social Sciences
U.N.D.C.P	United Nations Drug Control Programme
U.N.I.C.E.F	United Nations Children's Fund
W.H.O	World Health Organisation

CHAPTER ONE

INTRODUCTION

Introduction area for this study covers, background of the study and geographical area of study. Statement of the problem, purpose of the study, objectives of the study and research questions. Justification and Significance of the study. Assumptions of the study, limitations of the study and delimitations_of the study. Definitions of key terms and organization of the rest of the study.

Background to the problem

One in every five children between 13 and 15 years of age in developing and transitional countries smokes (Warren, Riley, Asma, Eriksen, Green and Branton, 2000). Half of these adolescents will die a premature death as a result of tobacco related illness if they continue smoking tobacco (Peto, Lopez, Borehan, Thun and Heath, 1994).

These young people get physically and psychologically dependent to the nicotine in tobacco and thus go into a habit of smoking before they know the danger of tobacco use.

The young ones have also become targets of the tobacco industry as the next generation of tobacco consumers. A situation that needs to be addressed (Lang, Chung, Betson, Wong and Hedley, 1998). Tobacco is the nicotine – rich leaf of the plant genus Nicotiana tabacum that has been grown especially for smoking,

sniffing or chewing and is currently grown widely for commercial use (Kenya Institute of Education, 2000).

Unlike other addictions, few services are provided to help people give up addiction to nicotine. Tobacco is used in many forms and most prevalent is the smoking of cigarettes.

All forms of tobacco use do not have known health benefit but instead cause ill health, and are associated with over 25 diseases and conditions affecting the human being. Virtually all human systems are affected by tobacco (Macigo, Guthua and Gathece, 2002).

It is arguably the most preventable cause of death in the world, more than any other form of drug addiction.

Tobacco use has now become a global epidemic and the need to take action against it is clear. The World Health Organization (W.H.O) attributes 4 million deaths a year to tobacco, and this is expected to rise to 8.4 million deaths a year by 2020 (Murrey and Lopez, 1997). It is estimated that seventy percent of these deaths will be occurring in the developing world. This will lead to a double burden of disease as tobacco is mainly associated with chronic degenerative diseases while most developing and transitional countries are currently still battling with infections and malnutrition (Yach, 2000).

Tobacco is the only legal product that if used as intended by the manufacturer, not only results in addiction but also increasingly leads to death. Tobacco industries

kill its best customers, and that is why they require new ones everyday to replace those who have quit the habit or died.

As the prevalence of smoking among adult population decrease in the industrially developed countries due to increased public awareness, stringent government policies and successful litigation, the tobacco companies are moving aggressively to developing countries to improve their global sales (Mackay and Crofton, 1996). Unfortunately, many governments in these countries do not have the experience or the awareness of the risks involved, and many lack the resources to counter the ruthless marketing by tobacco industry. According to Macigo, Guthua and Gathece (2002) the misinformation by the tobacco industry can only be successfully controlled with evidence - based facts. Most developing countries do not have representative data on the prevalence of smoking in their population, nor do they have any records on the effect of tobacco smoking on the health of their population, the environment and the economy in general.

Anecdotal evidence suggest that most analysis and pronouncements in the developing world in this field, come from the tobacco industry itself that proclaim monetary contribution in terms of taxes and are silent on the numerous ill effects of tobacco.

Hence the industry is a biased source of information for tobacco and health (Macigo, Guthua and Gathece, 2002).

Evidence suggests that tobacco use is one of the lifestyles being exported to the developing part of the world (Deen, Vos, Huttly and Tulloch, 1999). This is

observed in the form of youth in the developing parts of the world increasingly aping Western behaviour and lifestyle. Though the uptake of smoking is partly due to the effect of globalization, a large contributing factor is the massive advertising by the tobacco industry. They portray smoking as “fun”, “glamorous”, “mature”, “modern”, and a “Western”, practice (Yach and Paterson, 1994). Studies have shown that even children are aware of and are influenced by tobacco advertising (Charlton and Blair, 1989; Sargent, Dalton, Beach, Bernhardt, Heatherton and Steven, 2000). It has been shown that smoking in both the developed and developing countries start in the young, and for much the same reasons (Warren, Riley, Asma, Eriksen, Green and Blanton, 2000).

Studies from developed countries report that most people begin using tobacco before the age of 18 years (United State Department of Health and Human Services, 1994; Secretary of State for Health and Secretaries of State for Scotland, Wales and Northern Ireland, 1999).

In fact, nicotine addiction takes hold almost exclusively in children and the young. Data from the USA report that 87% of nicotine addiction starts below the age of 18 years (United State Department of Health and Human Services, 1994). It is this addiction nature of nicotine that makes most smokers maintain tobacco use (United State Department of Health and Human Services, 1988). Documents from tobacco industries confirm that they have been targeting the young in their search for more clients (Hurt and Robertson, 1998). To quote Kessler, Commissioner of the USA Food and Drug Administration, “nicotine addiction

begins when most tobacco users are teenagers. So let's call this what it really is a pediatric disease".

According to Kerre (1997) smoking is associated with many health problems which include, Mental Health where smoking impairs the ability to concentrate and natural relaxing ability, Social Health where smoke from a cigarette can pollute the environment and harm those in same room with the smoker, Food Health where smoking harms the taste buds on the tongue and impairs the sense of taste and that is why a smoker chooses to smoke instead of feeding on healthy food, Diseases and disorders where smoking increases the risk of lung cancer, heart and blood pressure, digestive and respiratory tract cancers, chronic bronchitis and emphysema and cardiovascular disease among others, Personal Hygiene where Tar from cigarette changes colour of teeth to black, leads to bad smelly breath, Exercise and physical fitness where smoking decreases cardiovascular endurance, To unborn smoking may complicate pregnancy, foetal injury, premature birth and low birth rate also developmental anomalies including delayed tooth formation (Kieser, Roeneveld and Desilva, 1996), Family Health where wives, spouses and children of a smoker become passive smokers by sharing same rooms while the smoker is on act. Not the adult, not the adolescent and certainly not the unborn is safe from the effects of smoking.

To combat this "paediatric disease" therefore there is need to collect and collate data from different schools so that the status and trends of relevant behaviour risk

factors are known. This will then provide the evidence for setting priorities in guidance and counseling and health related policies.

Unfortunately there is very little information on the prevalence of tobacco use among the youth in sub-Saharan Africa, including Kenya (Deen, Vos, Huttly and Tulloch, 1999).

An extensive literature search did not reveal any published studies conducted in Kenya on behavioral risk factors associated with smoking among the young and/or the general population. Further this researcher did not come across any published literature relating to the youth perceptions and attitudes on the effect of smoking on their health and family. These three areas form the basis for this research. It is becoming increasingly important to study health behavior because a substantial proportion of the mortality from leading causes of death is due to behavior patterns, most of which are modifiable (Strobe and Strobe, 1995). It is especially important in young people because at times the concerns of the young are at variance with those prescribed by teachers, parents, health professionals and even government (Jacobson and Wilkinson, 1994; Kenya Institute of Education, 1999).

Geographical Area of the Study

This is a study of assessing and explaining use of tobacco among primary school pupils using Kitui Central Division. Kitui Districts is one of the 13 districts of Eastern Province. It is located in the Southern part of Kenya. It borders Machakos and Makueni district to the west, Mwingi district to the north, Tana River district to the East and Taita Taveta district to the South. The district is located between longitudes 37° 45' and 39° 0' East and latitudes 0° 37' and 3° 0' South. The district covers an area of approximately 20, 402 km² including 6290.3 km² occupied by the uninhabited Tsavo National Park (Kitui Development Plan 1998). The district is divided into ten (10) administrative divisions namely, Central, Chuluni, Matinyani, Mwitika, Mutitu, Ikutha, Yatta, Mutonguni, Mutomo and Mutha. The divisions are further divided into 57 locations and 187 sub-locations (District Commissioner's office Kitui, 2001).

Out of the ten (10) divisions, it is only in Central and Chuluni divisions where tobacco is grown as main cash crop, Central Division producing more than Chuluni. (District Agriculture Office, Kitui 1996).

Central division has higher number of primary schools totaling 80 with total pupil enrolment of 25,332 where 12,568 are boys and 12,764 are girls, following Mutomo division which has highest number of primary schools totaling 150 with total pupils enrolment of 26,883 where 13,510 are boy and 13,373 are girls. (District Education Office Kitui 2004).

Statement of the problem

Western behavior and lifestyle are increasingly influencing and changing lifestyles in developing countries. Smoking is one of the more undesirable imports. The British Medical Journal termed it “Exporting tobacco slavery” (Editorial British Medical Journal 1971). This is reflected by the visible increase in smoking especially among the young.

Kenya is under strong Western influence, probably more so than her neighbours in the region. This is largely due to its central position in terms of communication in the region. There is massive presence of multinational tobacco companies who are involved in aggressive and extensive advertising in all walks of life.

The media outlets are inundated with advertising information whose purpose is to entice Kenyans and especially the young and women to start using tobacco products. The true state of behavioral risk factors associated with smoking among the young, their perceptions and attitudes on the effects of smoking on their health and life is however not known.

Knowing the tobacco companies influence on policy formulation in any country (Macigo, Guthua and Gethece, 2002), and seeing the need to respond early to this global epidemic, credible information and data is necessary to help guide the formulation of policies for tobacco growing, sale and consumption.

This is crucial in order to get evidence –based tobacco control policies and actions; heighten awareness and mobilize resources; and accelerate implementation of national strategies to prevent tobacco use.

The place to start with this task of collecting information and data is the young. It is to this age that most of the energies should be directed in order to have less people starting to smoke. Over 90% of teenagers who smoke 3–4 cigarettes a day progress to a regular smoking that lasts for 30–40 years (Russell, 1990).

According to Eriki World Health Organization Country Representative in a speech read by Dr Akpaka Kalu during this years world No - Tobacco Day which was marked on May 31st 2004 in Nairobi. It was reported that in Kenya 3 out of 10 smokers are women, while 800,000 primary school children aged 13 to 15 years smoke (Daily Nation June 1, 2004 page 7).

According to a study done by Odek-Ogunde and Pande-Leak (1999) they concluded that substances most commonly used by student were of the legal variety that is alcohol and tobacco and the rate was high hence they suggested an urgent need to gather more data which can be used to guide formulation of health promotion and prevention programmes.

A household survey in Nairobi reported a lifetime tobacco use of 65% for males and 33% for females and that about 50% of all those who smoke are below 15 years of age (Rhogo, 1999).

According to Mwenesi (1996) from a study undertaken in 1994 by the Government of Kenya and the United Nations International Drug Control Programme, revealed that drug abuse especially alcohol and tobacco has permeated all strata of Kenyan society, youth and young adults being the most affected groups, hence one of the main recommendation of the study was that the government of Kenya should setup specific demand reduction programmes to

enlighten and educate the public on the problem of drug abuse. It also stressed the need for a reassessment of government policy on the treatment of addicts.

According to Some (1994) in a study of misuse of drug in Kisumu district it pointed out alcohol and tobacco as being most highly abused. It pointed out also a need for further research to identify the unprescribed medicines and quantity other drugs used in order to advise on an appropriate local and National drug policy.

In 1980 a cross - sectional survey conducted among young people (10 to 29 years) and their parents in Kenya's capital Nairobi reported that 30% of these youth smoked regularly and 90% of their parents did not think tobacco use was harmful to health (Wangai ,1990) .

In a study which was done in the year 1982 among students in five mostly rural districts of Kenya reported that 20.6% of them were regular users of tobacco (Omino 1985).

In Kitui District the main cash crop produced are cotton, tobacco, fruit tree, sunflower and sweet potatoes.

The Central Division of Kitui District has also seen some reported instances of lateness to school and to home by teachers and parents despite pupils leaving the various places at the right time. Investigation revealed that some pupils were being used as drug transporters. (Officer Central Division Office Kitui 2004).

Tobacco products are freely available for purchase in Kenya. In Kenya, cigarette can be sold to anyone who asks for them, whether minors or adults, male or expectant mothers and sale of single cigarette is the norm, which makes them

easily available to anyone including pupils despite prohibition by the law. In addition, basic epidemiological information on tobacco abuse and its effects in Kenya is lacking (Deen, Vos, Huttly and Tulloch, 1999). A national survey on smoking has never been undertaken and few reliable surveys have been done. This means that information on trends is at best scanty.

Purpose of the study

The purpose of the study was assessing and explaining use of tobacco among final – year primary school pupils in Kitui Central Division.

Objectives of the study

This study focused on achieving the following objectives:

1. To determine the prevalence and distribution of use of tobacco products in relation to socio-demographic characteristics (age, gender, urban/rural locality, parent's educational background, religions affiliation, perceived health status and attitude towards school) among final year primary school pupils in Kitui Central Division.
2. To determine Kenyan primary school children's access to main sources of information and communication about tobacco products.
3. To explore the levels of risk awareness, attitude, social norms, behavioral norms, perceived susceptibility and perceived severity of diseases in

relation to use or non-use of tobacco products among final - year primary school pupils in Kitui Central Division.

4. To determine the relationship between tobacco consumption and other risk behaviors to school rules and regulations among final year primary school pupils in Kitui Central Division
5. To determine the effects of tobacco growing by family members of final-year primary school pupils in Kitui Central Division.

Research Questions

From the foregoing objectives, the following research questions were answered:

1. Which tobacco products are commonly used by the pupils and why?
2. What kind of information and communication about tobacco do pupils have and from where?
3. What experiences do pupils have towards tobacco?
4. How does tobacco consumption by pupils affect school rules and regulation?
5. How does tobacco growing by family members affect pupils?

Justification and significance of the study

Targeting tobacco use

Tobacco use is one of the main preventable causes of death and disability in the world. Globally, many people abuse tobacco across gender, age, race and social strata. With current smoking patterns, about 500 million people alive today will eventually die because of tobacco use.

These deaths will occur in men who are already smokers, in children who will become smokers and increasingly in women smokers. It is an emerging epidemic with worldwide morbidity and mortality rates rising everyday. The World Health Organization (WHO) projects that if current smoking rates remain the same by 2030 tobacco related deaths will be more than the total deaths of malaria, maternal and major childhood conditions and tuberculosis combined. Over 70% of these deaths will be in developing countries (Murracy and Lopez, 1994). As the market in the developed world shrinks due to increased public awareness and tougher legislation, the multinational tobacco companies are aggressively shifting their business to the developing countries. This means that the same health, economic and social problems that were and still are being experienced by the developed countries will be faced by the developing countries if there is no intervention. This means that the number of lives that are potentially at risk is so large that tobacco use and its control warrants serious attention.

Case for the young

The youth are the future of any nation, leaders of tomorrow and decision makers. Protecting their present health means a healthier future for any community.

Knowing the addictive effects of nicotine, primary prevention is the best approach for the young.

This would be instituted prior to or at the time of onset of tobacco use among these young people.

Studies have shown that if onset of smoking can be delayed until after the age of eighteen, many young people will never begin to smoke.

Further, that cigarette smoking signals a premature transition to adulthood, and is an early warning that the other problem, behaviors such as truancy, alcohol and marijuana use, precocious or risky sexual behavior might follow (Perry, 1992).

The tobacco industry maintains that smoking is a matter of choice. That may very well be true but knowing that the majority of smokers started the practice in their childhood, the contention begs the question "whose choice?" A child of 12 or 13 years is not legally competent to make an informed choice, neither do they have adequate information on the consequences of starting to smoke. Their reasons for starting smoking usually include peer pressure, curiosity, adventurism, pressure of work, boredom, frustrations, advertisement and rebellion among other things (Gossop and Grant, 1990; Ochieng, 1985; Onyango, 1985). Since they are below the legal age and cannot assume responsibility for their actions, it is important that we communicate with them at their level, and understand them before successful intervention programmes can be designed.

Since the tobacco industry knows that many health habits, including smoking, are established during one's teenage, they act accordingly. Internal documents from the tobacco industry confirm that they have been, and still are targeting the young

to increase their customer base (Hurt and Robertson, 1998). This is despite their denial of this fact. This is done through misleading advertising, use of young product promoters, sports and cultural activities promotion, branded tokens and even direct distribution of “free” cigarettes.

As civilized citizens of this world it is our duty to protect our children from a practice that has more than 50% chance of premature death.

Case for chosen study population

The Kenyan child starts school at around 6 years of age and does eight years of primary school education. By the time they are leaving primary school therefore, they are about 14 years old. Secondly, the number of children who graduate to secondary schools is barely 18% of those in primary schools (Ministry of Education, 1999). This researcher choice of final – year primary school pupils is thus appropriate as they should be more representative than secondary school students.

This was also the first time that a study of this nature was being conducted among primary school students in Kitui, and it should provide a sound base upon which future trend studies can be done.

Case for chosen study area

The choice of predominantly rural schools in Kitui Central Division in this study was due to the expectation that these young people are more likely to aspire to what their parents do and grow, and Kitui being one area where tobacco is grown by small scale farmers with the assistance of British American Tobacco (BAT) Ltd (Kenya Institute of Education, 2000; Daniel and Joel, 1992). These young

people are more exposed to tobacco in the homes, leaving them with a higher chance of temptation.

They may become important role models in their communities, and that they may eventually be opinion leaders and occupy important positions from where they would be able to influence policy related to tobacco growth and use after their education.

Understanding their behavior and being able to change their knowledge and attitudes for the better early in life, may result in adults who do not have unhealthy practices like smoking due to background influence.

Further, that being the policy makers in their adulthood, they may protect the public from such harmful habits and act as good role models for the young of the future.

Case for the Educationist and Government Ministries

The overall and long-term aim of this study is to contribute to the improvement of the health of the people of Kitui. It is also expected to contribute information that would be useful in designing preventive strategies against tobacco use in schools by related departments like drug control department under office of the President, institutions like Kenya Institute of Education (KIE) which develops the curriculum for schools, since the K.I.E. has been concentrating on drug and drug abuse including smoking mostly in secondary school, yet the initiation of the smoking habits starts at primary level.

It may also be of great importance to guidance and counseling teachers and other teachers who are concerned with pupil's discipline. The Ministry of Agriculture may also find it useful to help advise the farmers to change from growing tobacco to growing other crops which are more beneficial to their families in order to have food security. The Ministry of Environment and Resource Conservation may also find the research useful because we know that tobacco processing involves curing which need a lot of firewood hence destruction of trees and forest resulting to desertification, hence it will target the tobacco growing zones for corrective measures.

Lastly, the Headteachers of primary school may find this research useful because most of them have been denying the smoking problem in their schools for fear of being victimized by parents and Board of governors hence resulting to their transfers and yet the smoking problem starts at primary school, hence they will be more open to call suspected pupils and direct them to guidance and counseling department instead of suspension or expulsion of the victim.

Assumptions of the study

Assumption being any facts that a researcher takes to be true without actually verifying them.

This study was conducted under the following assumptions.

An individual's behaviour is best understood in terms of his or her own perceptions of the social environment (Comer and Norman, 1996).

Individuals can make contributions to their well-being through adoption of health enhancing and avoidance of health-compromising behavior (Comer and Norman, 1996).

Well-informed young people would respond in a positive rational way to information about future health risks (Nutbeam, Aarol and World, 1991).

It is accepted that many of the behaviors that are associated with adult morbidity and mortality develop and become established during adolescence (Millstein, Peterson and Nightinggale, 1993).

Limitations of the study

Limitation being aspects of a research that may influence the results negatively but over which the researcher has no control this study had the following:

The pupils may not give the right information due to confidential information being sought –about themselves and their families.

The headteacher may fail to give consent for the study to be taken in their schools for fear of being victimized.

Since the results are based on pupil's self-reports there is a possibility that pupils' reluctance to give socially undesirable responses might have resulted in under reporting of tobacco use habits. Caution should also be exercised in interpreting the data on age when cigarette or other tobacco products were first used because young people may not have reached the developmental stage that permit accurate recall.

Delimitations of the study

Delimitation being aspects of a research that may influence the results of the study but over which the researcher has control, the delimitation for this study were:

Due to many primary schools in Kitui Central Division (80) the study only looked at final-year primary school pupils in 10 primary schools selected from the 3 zones using stratified random sampling.

In interpreting the results, some limitations need to be considered. The sample was predominantly rural setting 71% and all participants were pupils in primary school. It is thus possible that out of school adolescence of this age and their counterparts in urban areas may have different tobacco use patterns than those reported in this study.

However, the 10 schools selected for this study represented about 21% of the total number of primary schools in Kalundu and Kyangwithya Educational Zones of Kitui Central Division.

They also represent a random sample of schools from this division. Hence, estimates to the smoking and tobacco use prevalence might be generalisable to pupils attending the final year in Kitui Central Division primary schools.

Definitions of key terms used in the study

The following key terms were used in this study:

- Drug:** Refers to a substance rather than food that is purposely introduced into the body by the pupil to change normal body functions, which makes him/her to behave erratically.
- Drug abuse:** Refers to persistent excessive use of any chemical or substance for any reason other than its acceptable medical purposes.
- Pupil:** Refers to learners in the primary sector of education whose age range between six years and below fifteen years.
- Tobacco:** Refers to the nicotine – rich leaf of the plant genus *Nicotiana tobacum* and are processed into cigarettes, cigars, pipe tobacco, snuff and insecticide.
- Young:** Refers to anybody below eighteen years of age.

Organization of the rest of the study

The study is organized in five chapters. Chapter one includes, the background to the study, Geographical area of study, statement of the problem, purpose of the study, objectives, research questions, significance of the study, assumptions, limitations, delimitations of the study, definitions of key terms and organization of the rest of the study.

Chapter two consists of the literature review. This is divided into the following topics:- Historical and cultural aspects, industrialized countries, Sub-Sahara African countries and the situation in Kenya.

Chapter three covers research methodology that was used. The following subheadings are included: design of the study, area of the study, population of the study, sample and sampling procedure, data collection technique, validity and reliability of the research instruments and description of variables.

Chapter four covers data analysis and discussion of research findings.

Chapter five consists a summary of the findings, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

Introduction

The literature review in this study is discussed under the following topics:- Historical and Cultural aspects of Tobacco origin and use. Industrialized countries and reported tobacco issues where the following sub-topics : deaths associated with tobacco and age of initiation to smoking are discussed. Sub-Sahara African countries and reported tobacco issues where the lifetime use of tobacco, current use, age surveyed and reported age of initiation are discussed. The situation in Kenya about tobacco where the following sub-topics are covered:- Tobacco growing areas, Tobacco access and availability, tobacco preventive strategies and socio- economic problems associated with tobacco are discussed.

Historical and Cultural aspects of Tobacco origin and use

Tobacco originated from South America and later spread to Europe (Kenya Institute of Education, 2000). Smoking tobacco was found to be expensive habit in South America way before Columbus brought information of smoking to Europe in 1492. The Turks introduced tobacco to Africa in the 16th century (Mahfour, 1974).

The Portuguese introduced it into East Africa, and by 1560, Spanish traders had introduced it to the coast of East Africa (Akehurst, 1968). It was not until the invention of the cigarette machine in the early parts of the 20th century that further interest was aroused in the large potential of the less industrialized countries as a market for cigarettes. Today, the tobacco industry is literally everywhere that the

human being is. The consumption of tobacco in its many forms (snuff, chewing, smoking, nicotine extraction) is a reflection of an individual's cultural bearing and lifestyle (Kerre, 1997).

In conservative communities, the use of tobacco products, indeed all intoxicants is heavily regulated by social and religions norms.

For example those who closely observe the Muslim religious code do not engage in this practice therefore the proportion of female smokers in the Muslim community is the lowest known averaging about 2% (Cunningham, 1996). This contrasts sharply with the high prevalence of smoking in Europe and North America whose norms are more liberal (Director General World Health Organization, 1998).

African traditions strictly prescribed the conditions under which intoxicants including tobacco could be used. Smoking was mainly for the elderly and most often male elders. Strict restrictions were placed on the young and those outside this circle and even their lifestyle were such that chain-pipe or cigarette smoking could not be possible in most instances and therefore tobacco abuse, as a problem did not exist (Asuni and Pela, 1986; Mwenesi, 1996).

Due to the increasing influence from Western oriented social permissiveness into the Kenyan society, industrial development and urbanization. Lifestyles have changed and the social controls that existed before have been dismantled and in their place a new culture has emerged (Kerre, 1997).

Industrialized countries and reported tobacco issues

Deaths associated with tobacco

In the industrialized parts of the world, tobacco is responsible for 24% of all male deaths and 7% of all female deaths (Boyle, 1997).

The figures rise to as high as 40% among men in some countries of Central and Eastern Europe, and 17% among females in the USA.

It is still the biggest cause of adult death in these countries and if the global trend continues, it could well become the major cause of adult death in the world.

North America and Western Europe saw an increase in cancer mortality up to the late 1980s and are now observing a decline. Currently between 25% and 30% of all cancer deaths in Europe are due to tobacco use (Levi, 1999).

While Japan has experienced a ten-fold increase in both sexes since 1975 (Pandey, Mathew and Nair, 1999).

Experts in all these regions have strongly recommended reduction in tobacco use as a way to further reduce the incidence of cancers and tobacco related diseases and behavior (Biesalski, de Mesquita, Chesson, Chutil, Grimble, Hermus, Kohrie, Lotan, Norpoth, Pastorino and Thurnham, 1998).

For men in this part of the world, the full effect of smoking can already be seen. Tobacco causes one third of all male deaths in middle age and one fifth in old age. In women, the peak of the tobacco epidemic has not yet arrived. Tobacco causes nearly one third of all deaths of women in the USA and although it has only 5%

of the world's female population, the USA has 50% of the global deaths due to tobacco used by women (United State Department of Health and Human Services, 1988).

Age of initiation to smoking

Of all tobacco smokers in United States of America about 90% started the habit in their teens (United State Department of Health and Human Services, 1994).

The problem starts with the young children unknowingly becoming addicted to nicotine and hence going through life as smokers. Increasing numbers of teenagers are risking their lives in Europe and North America, and reports show that the average percentage of teenagers who smoke everyday increases from 12% in 1994 to 16% in 1998.

Girls are smoking at higher rates than boys in most countries surveyed and rate have almost doubled in the Russian Federation, Estonia and Lithuania (UNICEF, 2000).

Sub-Sahara African Countries and reported tobacco issues

Other than South Africa, the rest of sub-Sahara Africa has a lot in common and it is these countries that this researcher concentrated on in the literature review. The researcher looked at reported current use of cigarettes, lifetime use of cigarettes, prevalence of tobacco use and mean age surveyed.

The people of Africa have used psychoactive substance like alcohol, tobacco, cannabis and a wide range of natural hallucinogens throughout recorded history (Partanen, 1991).

In the 20th century, wars, decolonization, westernization, external cultural influence, urbanization and inclusion in the global economy, are among the main reasons for the increased pace of social and cultural changes. Many observers have therefore held the view that this has created a breeding ground for a rapid increase in the use of intoxicating, often harmful substances like alcohol and tobacco (Manla, Lindblad and Tigerstedt, 1998). Following this, it is expected that young people are going to be particularly vulnerable to the change and thus are liable to use intoxicants more often and in larger quantities. The importance of the young generation is underlined by the fact that in Sub-Saharan Africa, about half the population comprises of children below 15 years of age (Rimmer, 1991).

Over the years, small-scale epidemiological studies on the use of tobacco have been done in the region, mostly in secondary schools and institutions of higher learning. Most of the studies suffer methodological problems and therefore the quality of such reports has been low resulting in a weak basis for knowledge.

Outcome measures have also differed from study to study and have included ever use, current use, consistency and frequency of use. This makes comparisons difficult.

Generally when compared to the Western countries, young in this region report lower rates and number of cigarettes smoked per day, while daily smoking is more frequent in males than females.

In a study which was done in the year 1988 of a sample of 649 Nigerian University students with mean age 23 years reported that 11% of them were

current cigarette users while 37.4% of the total were lifetime users (Adelekan, Abiodun, Obayan, Oni and Ogunremi, 1992).

A similar study with 1,041 senior secondary school students in the same region and year with mean age 16.8 years reported current use at 4.4% and 17% of the total were lifetime users (Abiodun, Adelekan, Ogunreni, Oni and Obayan, 1994).

A comparison of two consecutive cross-sectional surveys of 1988 and 1993 with 1,041 and 848 students respectively, reported that though smoking remained a mainly male activity, the proportion of females smoking went up from 1% to 3% while that of males had stabilized at 6-7% (Adelekan and Ndom, 1997).

It is difficult to make any specific judgments on trend but these studies show that tobacco use is increasing with age and also among females. Total use is still low though, averaging 7% in males and 2% in females.

In neighboring Ghana a 1992 publication paper reported similar figures from nine secondary schools, with current smokers being 10% and lifetime users 31% of the total population (Amonoo-Lartson and Pappoe, 1992).

In neighboring Sierra Leone a study conducted in 1994 (before the current civil war) reported lower figures. Lifetime use of tobacco for secondary school students in the Southern part of the country was reported at 9% and current use at 4.2% of the 713 students surveyed. Mean age of onset was 15.1 years and use among males was more than among females (Abul and Lisk, 1995).

In Burkina Faso, a 1996 publication on secondary school students reported daily smoking at 13.6% and occasional smoking at 62% of the total population. There

were low quantities of cigarettes being smoked and the age of initiation was reported to be 13.4 years (Sondo, Testa and Soura, 1996).

In a study which was done in the year 1997 of a sample of 289 adults of mean age 20.9 years reported relatively higher figures of 30.7% for current users which may indicate an upward trend in tobacco use in this country (Ouedragogo, Ouedraogo, Ouobo and Sawadogo, 2000).

In Senegal, a 1994 survey among 12 to 16 year olds in a Suburb of the capital Dakar reported 14% current use of tobacco (Camara, Wade, Hanne, Sow, Dioufs, Sall, Bamsarr and Fall, 1994). In a rural setting in the same country, though prevalence of tobacco use was reported to be 24% (9% for teenagers and 32% for adults), cigarette smoking was only 14.4% for the whole population there with the rest being in traditional smokeless form (Kare, Lym, Diouf ND, Diop PS, Diao, Diop AK, Dia, Diop IB, Hane Sarr, Bam and Diouf SM, 1998). It was concluded that tobacco use occupied an important role in this rural community.

In Zimbabwe there has been a distinct increase over time, of lifetime users from 4.6% and 18% to 12% and 27% in females and males respectively in four years (Munodowafa, Marty and Gwede, 1992; Eide and Acuda, 1996), which, the authors have associated with increasing socio-economic status of the users.

Figures from rural areas showed a similar pattern but is marginally lower than the urban ones at 8% and 27% for the females and males respectively (Khan and Arnoft, 1996; Acuda and Eide, 1994).

Across the border in Zambia, a study among students in secondary schools (336 students) and tertiary institutions (1,836 students) with mean age varying from 16.8 to 23.6 years for girls and 16.8 to 27.4 years for boys, reported a large variation in the prevalence of lifetime tobacco use. Depending on the type of school this was found to be from 57% to 76% for boys and from 3% to 33% for girls (Haworth, 1982).

In Northern Sudan, a 1994 survey of 2,000 households reported that although only 9% of the males smoked cigarettes, 40% of them dipped toombak, the local name for the snuff. For the females, this practice was only common among the older age group where 10% dipped toombak, while less than 1.5% smoked cigarettes (Idris, Prokopezzyk and Hoffmann, 1994).

Another household survey of 21,648 eligible members done in 1998 reported low prevalence (1-2%) of tobacco use in people below 17 years, but indicated an abrupt increase to 25% in late adolescence.

Further, that 34% and 12% of adult males used toombak and cigarettes respectively. Figures for adult females were 2.5% and 0.9 respectively (Idris, Ibrahim, Warnakulasuriya, Cooper, Johnson and Nilsen, 1998).

In a 1994/95 survey in neighbouring Ethiopia of 1,436 young people 15-24 years old in Addis Ababa reported that current smoking was 1.1% among females and 11.8% among males (Betre, Kebede and Kassaye, 1997). The reported prevalence of smoking among secondary school students (sample 519) in the same town was 13.8% in 1993 (Kebede and Ketsela, 1993). Not enough published information is available to make any trend analysis for Ethiopia.

There is little published information on tobacco use especially among young people from countries in Southern Africa.

In a study of 1,133 secondary schools students of 11 to 22 years from Lesotho reported that 27% and 2% of males and females respectively were lifetime users of cigarettes (Meursing and Morojele, 1989). It is interesting to note that a study done among the elderly of 60 years or more in a village in Botswana reported that 11% of them smoked daily and all the smokers but one were men (Clausen, Sandberge, Inastad and Jortdahl, 2000). Further, that 70% of those who smoked, consumed more than 15 cigarettes per day. Taking snuff was a common habit, as 50% of the women and 33% of the men took snuff more than twice in a day.

Tanzania has reported some regional differences in tobacco use. Available statistics show a variation between 5.4% and 16.9% in the general population (Mwaluko, Swai and Mclarty, 1991).

A 1993 publication paper reported 0.4% and 8.3% smoking prevalence among females and males respectively (Kitange, Swai Masuki, Kilima, Alberti and Mclarty, 1993) while Arusha had levels of 2.6% for lifetime use (Lugoe, Klepp, Rise, Skutle and Biswalo, 1995). More recent data reveal smoking rates of 21.7%, 55.8% and 60% among males in Dares-Salaam, Hai and Morogoro respectively. Female rates are lower at 1.5%, 19.7% and 16% in the same areas (Adult morbidity and mortality project (Ammmp), 1997). Though criticizing the survey and interview methods for under reporting, Rashid et al still show an increased trend of smoking from 10.4% (18.1% for male and 1.9% for female) to

16% (19.8% for male and 4.0% for female) in the Ilala area is Dares-Salaam (Rashid, Aspray, Edwards, Mugusi, Whiting, Unwin, Setel and Alberti, 2000).

Though Tanzania has collected more data on tobacco use than many Sub-Saharan Africa countries, none of these have been representative of the whole population. From Uganda, the researcher could not identify much published data on smoking. A survey among Ugandan student teachers reported current daily smoking at 7% for males and 1% for females (Masokoyih, 1999).

In Kenya, comprehensive national data are not available a situation that is not different from other Sub-Saharan countries. Anecdotal reports and a few small-scale surveys have been done, which shows that tobacco use is increasing in the population and especially among the young.

In a study among secondary school students aged 14 to 20 years, it was reported that 16.1% of them smoked more than three times every week (Dhadphale, Mungech, Syme and Acuda, 1982).

A year later in 1983, a study that covered Nairobi (Urban) and Machakos (rural) reported a lifetime use of 40% (Yambo, 1984).

A recent study conducted throughout the country reports that 48.2% of all students and 20% of the females in secondary schools smoke (Amayo, 1998). Another study investigated the prevalence and pattern of abuse of drugs at a private University and reported a lifetime use of tobacco of 54.7% and current use at 24.7% among students (Odek-Ogunde and Panderleak, 1999).

A Kenya Global Youth Tobacco Survey conducted in 2001 reported 13% of students currently use any form of tobacco; 7% currently smoke cigarettes and 9% currently use some other form of tobacco (Global Youth Tobacco Survey, 2001)

The Situation in Kenya about tobacco

Tobacco growing areas

Tobacco for cigarettes is grown by small scale farmers with the assistance of British American Tobacco (BAT) (K) Limited in the lower part of Meru for example Mitunguu and Giaki; Embu for example Ena; South Nyanza for example Migori; Bungoma for example Malakisi;

Central Province for example Sagana; Kitui district for example Central and Chuluni Divisions. The tobacco growing areas are still expanding to satisfy the local and export demand (Kenya Institute of Education, 2000).

Tobacco Access and Availability

Anecdotal information shows that the most affected group is that of the low-income earners, and this extra expenditure further puts pressure on their meager resources. Tobacco products are freely available for purchase in Kenya. There are over 20 different brands of cigarettes from the three main tobacco companies operating in the country. There is no legislation regulating the growing, manufacturing, sale and consumption of tobacco (Macigo, Guthua and Gathece, 2002).

The only official regulation in Kenya is Legal Notice No.122 of 31st July 1984. This appeared in the Kenya Gazette supplement No. 52 of 10th August 1984, where the Minister for Health published what is referred to as “public Health (warning on cigarettes) rules under the Public Health Act.

These rules deal with the nature, form and content of the health warning on cigarette packs and advertisement that we have in Kenya today.

It says, “Cigarette smoking is harmful to your health (Kenya Gazette, 1984). It also prohibits smoking in public places and vehicles but this has been largely ignored.

This is grossly inadequate as a control measure if compared to the current magnitude of the tobacco use problem.

In Kenya, cigarette can be sold to anyone who asks for them, whether minors or adults, male or expectant mothers. Sale of single cigarette is the norm, which makes them easily available to anyone. This coupled with the extensive and unregulated advertising, makes it easy for the young to start the habit at a very tender age. Kenya is therefore in need of a formal policy on the growing, promotion and consumption of tobacco. The main obstacle to this has been the tobacco industry itself. They have opposed most attempts by government departments to document the extent of the problem on a countrywide basis (Macigo, Guthua and Gathece, 2002). In addition, the lack of data on tobacco and its effects on the different facets of society has also contributed to this state of affairs. This is largely due to lack of resources to carry out a study representative

of the whole country. Without this data, it is difficult to make a convincing case for change of policy.

Tobacco preventive strategies

Preventive strategies in Kenya have been largely modest efforts by individuals, institutions and especially the health professional bodies for example Kenya Dental Association, Guidance and counseling firms and currently the established Department under the Office of the President headed by Kaguthi in the National Agency for Campaign Against Drug Abuse (NACADA).

Individual health workers have been encouraging and providing support to their patients who smoke and wish to stop the practice.

There have been no coordinated efforts in targeting the young and school children and those who are caught in the smoking habits are mostly suspended from school, because the guidance and counseling departments in schools are not well established to deal with smoking.

Individual health workers and professional bodies have occasionally organized lectures, seminars, youth centres in churches or hospitals and open fora for young people to share knowledge on the effects of tobacco on health and to show them related films. This has enabled the message to be delivered to some schools, institutions of higher learning and professionals especially those in guidance and counseling and in health, but most schools are not aware of the services.

There have also been international media campaigns to sensitize the public on the danger of smoking. Largely through press statements and publicity functions, the campaign against tobacco use has over the years become more visible.

For example the annual World Health Organization (W.H.O) “No Tobacco Day” is one such opportunity.

The government has recently been even more seriously involved in such occasions and this shows a commitment to regulating the use of tobacco products especially among the young. But does this information reach all teachers and pupils?

Socio-economic problems associated with tobacco

The tobacco ill - health has led to a wide range of socio-economic problems associated with the cost of hospitalization, decreased productivity of workers, individual and family financial hardships and general financial strain on the National Health Care system and education system.

In the wider scope, the tobacco industry has contributed to general environmental pollution and degradation, food shortages as food production is replaced by tobacco cultivation, energy depletion and desertification due to destruction of forest and vegetation either by design to be replaced by tobacco plants or through accidental fires (Macigo, Guthua and Gathece, 2002).

All these negative effects of tobacco are not known by all farmers, parents, pupils and teachers, giving an example of secondary school agriculture teacher who teaches tobacco as one of the cash crop from the book, where tobacco is portrayed

as a good crop (Kenya Institute of Education, 2000), hence the right information concerning tobacco products should be available and given to schools to help control the smoking behaviour.

CHAPTER THREE

RESEARCH METHODOLOGY

Introduction

The research methodology for this study is discussed under the following sub-headings; design, area and population of the study, Sample and sampling procedure used. Also discussed was Data collection technique, validity and reliability of the research instrument and description of variables in the questionnaire.

Design of the Study

The study used across – sectional school –based survey. In cross –sectional survey the information was collected at one point in time and it was analyzed by a variety of method depending on the types of inferences that were to be made from the collected data.

In this design standardized information was collected from a sample drawn from a predetermined population.

This survey seeked to obtain information that described existing phenomena by asking individuals about their perception, attitudes, behaviour or values. Apart from just describing survey was used for explaining or exploring the existing status or relationships of two or more variables, hence it was the most suitable design for this research.

Research instrument used was a self- administered questionnaire.

Area of the Study

This study was conducted in Kitui Central Division, which is in Kitui District in Eastern Province.

The Kitui Central Division has three zones, Kalundu, Kyangwithya and Miambani. During the time of the study Kitui Central Division had 74 public primary schools and 6 private primary schools totaling to 80 primary schools (District Education Office 2003.). This was also the division which grew the highest amount of tobacco followed by Chuluni Division.

Population of the Study

The target population was primary school pupils who were doing their final year primary course Kenya Certificate of Primary Education year 2004.

The total standard eight pupils were 2813 where 1388 were boys and 1425 were girls.

All the public primary schools were considered for this research however Miambani Zone was dropped due to lack of tobacco farms in the zone, and instead its schools were replaced by Kalundu and Kyangwithya Zones.

Sample And Sampling Procedure

Sampling frame was obtained from the District Education Office, which had the listing of all the primary schools in the division listed according to their zones.

This study employed stratified random sampling technique. Kitui Central Division was divided into two zones Kalundu and Kyangwithya after dropping Miambani zone. The two zones were selected and stratified sample procedure calculation was used to get the ratio number of schools that participated from each

zone using also their enrolment figures (Lucey, 1987 and Gay in Mugenda, 1999).

zone	School per zone	Standard eight enrolment per zone	Ratio of schools which participated to cover 21%
Kalundu	27	Boys 585 Girls 559 Total 1142	137 116 Total 253 pupils =5 schools
Kyangwithya	30	Boys 527 Girls 549 Total 1076	91 123 3 without sex Total 217 pupils = 5 schools
Total per two zones	57	2218	470 pupils = 10 schools

From the ratio calculation 5 schools each from Kalundu and Kyangwithya zone were randomly selected after assigning numbers from 01 to 57 for all the primary schools in the two zones. This was through the use of random sampling numbers in Appendix II which ensured that each and every school from the zone had an equal chance of being selected as part of the sample which participated.

All the pupils of both genders doing their final year at primary level (K.C.P.E 2004) in the 10selected primary schools were invited to participate in the study, providing a total of 470 pupils eligible for the study.

A total of 470 pupils completed self-administered questionnaires in their respective schools.

The non-response was not considered having been caused by absence from school or class on the day of data collection. Absentees were not recontacted. After consent from the school authorities which had been done two weeks earlier than the day of data collection, the pupils were given the option to decline participation but none declined.

Data Collection Technique

Permission to conduct the study was granted by the Ministry of Education, Science and Technology in June 11th 2004. The education authorities advised that since the questions being asked were general and the answers were anonymous, parental consent was not compulsory. The principal investigator was assured that this was acceptable ethical practice before the pupils were given the questionnaire to complete.

Verbal consent was obtained from the school authorities and from the participating pupils.

Data collection was carried out between June and July 2004.

The self-administered questionnaire was constructed and administered in English, which is the language of instruction in all formal academic institution in Kenya. It was peer reviewed for content validity and pre- tested in two schools with 68 pupils where 13 pupils responded yes for having used tobacco, giving yes response of 19% before being used in the field.

The pre- test results were used to make minor adjustments to the original questionnaire, which collected data on socio- demographic characteristics; primary school pupils access to main sources of information and communication

about tobacco products; knowledge about risk awareness associated with tobacco use, attitude, social norms, behavioural norms, perceived susceptibility and perceived severity of diseases in relation to use and non-use of tobacco products and regulation policies; tobacco consumption by pupils and related risk behaviour to school rules and regulation; and effects of tobacco growing by family members were investigated.

The pupils completed the questionnaire in their respective classrooms under supervision of the principal investigator.

The exercise took place in the absence of their teachers to guarantee confidentiality and reduce response bias. The time allocated for completion of the questionnaire was one hour and the pupils were free to ask questions at any time during the exercise. The sitting arrangements were far apart to avoid pupils from looking at each other's response.

Description of Variables in the Questionnaire

The questionnaire was arranged in five parts.

Part one dealt with socio - demographic characteristics where questions about self and their family were asked.

Part two dealt with questions about tobacco products. Part three dealt with reasons for tobacco use, health dangers or risks of tobacco use and information source about tobacco products.

Part four dealt with behaviours experienced by pupils who smoke, especially towards school rules and regulations.

Part five dealt with questions seeking attitudes and opinion of pupils towards tobacco growing and the tobacco control measures. For more information, see Appendix 1 page 85.

CHAPTER FOUR

DATA ANALYSIS

Analysis were performed using the statistical package for social sciences(SPSS) version 10.0.

Frequency distribution and percentage were computed for all variable on tobacco use. Cross- tabulation was used to estimate the proportions of lifetime smoking, lifetime use of smokeless tobacco, fathers/mothers/friends and Teachers tobacco use according to socio- demographic characteristics. Statistical inference calculation were done and estimated population proportions were gotten at 95% confident level.

Table 1 shows the percentage demographic characteristics of the sample. Where gender; Age; Father's education; Mother's education; Zones and Holiday spending are given.

Table 1: sample characteristics: Absolute (n) and relative percentage distribution of primary school pupils according to demographic characteristics.

Demographic characteristics (N= base for calculation)	%	N
Gender (N=467)		
Girls	51	(239)
Boys	49	(228)
Age (years) (N=469)		
14 and younger	74	(346)
15 and older	26	(123)
Fathers education (N=449)		
Lower	77	(345)
Higher	23	(104)
Mother Education (N= 422)		
Lower	62	(261)
Higher	38	(161)
Zone (N= 470)		
Kalundu	54	(253)
Kyangwithya	46	(217)
Holiday spending (N= 466)		
Rural	71	(331)
Urban	29	(135)

Demographic Characteristics

As shown above in Table 1, the proportion of girls (51%) were more than boys (49%) in the division.

Seventy four percent of the pupils in the division were 14years or younger , compared to 26% who were 15years or older.

Seventy seven percent of fathers were described as having lower education, compared to 23% who had higher education.

Sixty-two percent of mothers were described as having lower education, compared to 38% who had higher education.

When comparing the education of mother (38%) and father (23%) the division has mothers with higher education than fathers.

Fifty- four percent of the pupils were from Kalundu zone while 46% were from Kyangwithya zone.

Seventy – one percent of the pupils spend their holidays at rural areas while 29% spend in urban areas.

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Table 2 shows the percentage estimates of reported tobacco use. Where preference rates with respect to lifetime smoking; Lifetime smokeless - tobacco use; current smoking; current tobacco use; pupils reported use of tobacco by teachers, fathers, other relatives, friends, pupils in school, brothers and sisters, mother; Perception of who uses tobacco most between boys and girls; onset of smoking; smoking with friends; offered cigarette by friends and pupils getting tobacco on their own.

Table 2: Percentage estimates of reported tobacco use.

Variable (N= base for calculation)	Estimate % (N)	
Prevalence rate		
Lifetime smoking (N=466)	7	(33)
Lifetime smokeless-tobacco use(N= 467)	7	(33)
Current smoking (N= 467)	6	(30)
Current tobacco use(N= 469)	4.5	(21)
Pupils reported use of tobacco by		
Teachers (N= 468)	64	(298)
Father (N=456)	35	(161)
Other relatives (N=420)	35	(146)
Friends (N=467)	33	(153)
Pupils in school (N= 466)	31	(145)
Brother & sister (N=915)	8	(77)
Mother (N=464)	2	(11)
Perception who use tobacco most		
Boys (N=463)	97	(451)
Girls (N=463)	3	(12)
Onset of smoking (N= 469)		
14years& younger	5	(23)
15years and older	2	(11)
less than 10 years	1	(5)
Smoke with friend (N= 469)	5	(22)
Offered cigarette by friends (N=467)	4	(18)
Get tobacco on their own (N=467)	4	(18)

Experience of tobacco use

A total of 7% confirmed lifetime smoking whereas 6% were current smokers.

Seven percent-confirmed lifetime smokeless –tobacco uses whereas 4.5% were current tobacco users. Most pupils reported tobacco use by teacher (64%), father (35%), other relatives (35%), friends (33%), pupils (31%), brother and sister (8%) and mother (2%). Perception of pupils about use of tobacco was that boys (97%) use more than girls (3%).

A total of 1 % of the participating school pupils reported to have tasted tobacco for the first time before the age of 10 years, whereas 5% and 2% reported to have started at the age of 10- 14 years and 15years respectively.

Five percent of pupils reported having smoked with their friends, whereas 4% having been offered cigarette by their friends while 4% bought or rolled on their own.

Table 3 shows the percentage estimates of reasons which make most pupils start using tobacco.

TABLE 3. Percentage estimate of pupil's reasons of what makes most of them start using tobacco.

VARIABLE (N=base for calculation)	ESTIMATE %(N)	
Peer pressure (N=459)	66	(303)
Lack of parental guidance (N=447)	57	(256)
Curiosity (N=436)	53	(230)
Free exposure to tobacco(N=436)	49	(214)
Lack of information on tobacco (N=458)	48	(218)
Advertisements (N=439)	47	(206)
Adventurism (N=426)	46	(198)
Boredom (N=431)	45	(196)
Frustration (N=416)	45	(189)
Pressure from school work (N=425)	39	(165)
Rebellion (N=430)	39	(169)

Reasons for tobacco use

A total of 66% confirmed peer pressure had the highest influence followed by lack of parental guidance (57%), curiosity (53%), free exposure to tobacco (49%), lack of information on tobacco (48%), adventurism (46%), boredom and frustration had the same (45%) whereas pressure from school work and rebellion also had the same percentage (39%) being the lowest.

Table 4 shows the percentage estimate of pupils' knowledge of tobacco related health risks or dangers.

Table 4. Percentage estimate of pupil's knowledge of tobacco related health risk or dangers.

(N= base for calculation)	Estimate % (N)	
Causes diseases and disorders e.g cancer(N=457)	89	(405)
Causes social ill health e.g pollution (N=454)	86	(390)
Affects personal hygiene e.g tar on teeth(N=449)	86	(388)
Affects mental health (N=468)	85	(399)
Affects pupils morality (N=449)	74	(332)
Affects academic performance (N=455)	68	(308)
Affects family health e.g passive smoking (N=450)	68	(305)
Reduces endurance to exercise and physical fitness (N=451)	63	(283)
Affects unborn babies (N= 426)	62	(265)

Pupil knowledge of tobacco related health risks or dangers

More than 60% of all the pupils were aware of the tobacco related health risks or dangers confirming tobacco: Causes disease and disorder (89%), affect personal hygiene (86%), causes social ill health (86%),affect mental health (85%), affect pupils morality (74%), affect academic performance (68%) affect family health

(68%), reduces endurance to exercise and physical fitness (63%) and affects unborn babies (62%).

Table 5 shows the frequency distribution of pupils according to reported sources of information on tobacco products.

Table 5. Percentage of those confirmed to have talked, heard or read about tobacco products.

Source Of Information (N= base for calculation)	% (N)
Talked about tobacco	
Teachers (N=461)	81(374)
Parents (N=467)	77(358)
Mass media e.g. Television, radio (N=448)	77(346)
Church leaders(N=450)	72(324)
Book, magazines or bill boards(N=447)	72(324)
Grandparents (N=450)	66(298)
Others(N=421)	64(271)
No body (N=413)	26(109)
Tobacco advertising	
Ever seen or heard tobacco advertisement(N=467)	88(411)
Pupils with objects with cigarette brand name (N=467)	34(161)
Use of object with cigarette brand name (N=379)	34(130)
Offered free cigarettes by tobacco company (N=462)	17(79)
Existing laws and policies on smoking	
Smoking is not allowed in schools (N=468)	92(430)
Pupils are not allowed to smoke (N=468)	85(397)
Smoking is not allowed in public places (N=466)	67(312)
Pupils found smoking in school are expelled (N=469)	60(282)
Cigarettes are not sold to people below 18 years (N=465)	18(86)

Sources of health risk information and advertising

The most frequently reported source of information on tobacco related risk were the teacher (81%), parents and mass media ranked second with each (77%), book, magazine or billboards and church leaders was third each with (72%), followed by grandparents (66%), others (64%) while (26%) had talked with no body.

Most of the pupils investigated (88%) admitted having heard or seen tobacco advertisements, whereas (34%) confirmed having objects with cigarette brand name on it, which they were using.

Seventeen percent having been offered free cigarettes from tobacco companies.

Existing laws and policies on smoking were not new to pupils as (92%) agreed smoking was not allowed in schools, whereas (85%), (67%), (60%) and (18%) agreed pupils are not allowed to smoke, smoking was not allowed in public places, pupils found smoking in school are expelled and cigarettes are not sold to people below 18 years respectively.

Table 6 shows reported behaviour experienced by smoking pupils.

TABLE 6. Percentages of reported behaviour experienced by pupils who smoke.

Behaviour experienced (N=based for calculation)	% (N)
Relation with other pupils (N=469)	
Violent and withdrawn	74(345)
Popular	26(123)
Relation with teachers (N=469)	
Disobedient	96(449)
Obedient	4(2)
Performance academically(N=469)	
Very poor	86(403)
Fair	11(51)
Good	3(15)
General appearance in school (N=467)	
Bulging red eyes	59(277)
Very shabby and untidy	34(160)
Smart, very neat and attractive	6(30)
Doing assignments given by teachers	
No	91(425)
Yes	9(44)
Complaints brought by parents & community (N=468)	
Yes	68(318)
No	20(94)
Cannot say	11(51)
Regular attendance to schools (N=464)	
No	95(439)
Yes	5(24)

Behaviour experienced by smoking pupils

Most of the pupils investigated admitted (74%) of pupils who smoke are violent and withdrawn to their fellow pupils, (96%) are disobedient to teachers, academic performance is very poor (86%), generally appear very shabby and untidy (34%), while most have bulging red eyes (59%), do not do assignment given by teachers

(91%), whereas (95%) and (68%) do not attend school regularly and complains are brought to school by both parents and community about them respectively.

Table 7 shows reported tobacco growing in Kitui Central Division.

TABLE 7. Percentages of pupil's opinion on tobacco growing and the control measures.

Tobacco growing (N=base for calculation)	% (N)
Tobacco growing in Division (N=418)	64(268)
Family (N=469)	11(50)
Who tastes tobacco product earlier	
Pupils from tobacco growing family (N=464)	59(275)
Pupils from tobacco non-growing family (N=461)	27(126)
Family growing tobacco	
Affects their pupils (N=461)	65(299)
Have a lot of money after sale (N=468)	57(268)
Have enough food to their family(N=468)	40(185)
Know the dangers of tobacco growing (N=459)	40(186)
Have the best crop for their farm (N=466)	29(136)
Have enough firewood from their farm (N=468)	22(103)
Pupils intention to	
Continue with education (N=465)	94(435)
Grow tobacco in future (N=459)	10(45)
Control measures taken in school toward tobacco and smoking (N=460)	61(279)

Tobacco growing in the division.

Despite low figure for family growing tobacco (11%) most of them admitted tobacco was largely grown in the division (64%).

Pupils from tobacco growing families taste tobacco earlier (59%) compared to non-tobacco-growing families (27%)

Despite giving positive response for family growing tobacco having a lot of money after sales (57%), they admitted family growing tobacco affects their

pupils 65%, and they all gave negative response to having enough food for their family (40%), knowledge of dangers of tobacco growing (40%), having the best crop for their farm(29%) and having enough fire wood from their farm (22%). Pupils intention to grow tobacco in future was very low (10%).

Most pupils reported control measures being taken in their school toward tobacco use and smoking (61%)

Discussion of Research Findings.

The results of the present study provide information about tobacco use among primary school pupils of different socio-demographic and cultural origin.

It also provides information on reasons for tobacco use. The knowledge pupils have of tobacco-related health risks or dangers and their source of information regarding tobacco. The effects of tobacco consumption to school rules and regulations and pupils opinion on tobacco growing.

A striking finding for this study was that the target age was achieved because (74%) of the participant were 14 years and younger as confirmed by Ministry of Education (2004).

Girls (51%) were higher than boys (49%) while mothers (38%) had higher education than fathers (23%) but generally both parents had lower education, mothers (62%) and fathers (77%) which made probably they where not economically stable and hence the high percentage of tobacco growing in the division (64%) as most of them were rural dwellers (71%).

The present study revealed that 14% of the pupils were lifetime users of any form of tobacco, where 7% were lifetime smokers and 7% were lifetime smokeless-

tobacco users whereas 6% and 4.5% were current smokers and current tobacco users respectively.

This was in line with the Kenya Global Youth Tobacco Survey conducted in 2001 which reported 13% of students current use any form of tobacco, 7% currently smoked cigarette and 9% currently used some other form of tobacco (Global Youth Tobacco Survey 2001).

The results also corroborate findings among adolescents in other parts of sub-Saharan Africa (Camara, Wade, Hanne, Sow, Dioufs, Sall, Bamsarr and Fall, 1994; Munodowafa, Marty and Gwede, 1992) but are much lower than for similar age groups in industrialised countries. They are also much lower than findings from older population samples in Kenya, which have ranged from 54.7% to 65% for lifetime tobacco use and 24.7% for current use (Odek-Ogunde and Pander-Leak, 1999; Rhogo, 1999). Cultural constraints appear to delay experimentation in this rural community.

The results reveal that the prevalence for lifetime smoking (7%) equals lifetime use of smokeless tobacco (7%). This could be associated with the extended family influence where old and very old mostly smoke and sniff respectively. The present results indicate that the primary school pupils investigated are at risk of becoming regular users of tobacco, as they grow older. This may partly explain the high prevalence of current smoking of 48.2% reported in secondary schools in Kenya (Amayo, 1998).

These results appear to imply that smoking intervention programmes are warranted as early as 10 years of age. This is in accordance with previous

suggestions that smoking intervention among high-risk children should start as early as possible.

As expected boys (97%) had more experience with tobacco use than girls (3%) and this confirms that cultural and social sanctions still protect girls more than boys. This is similar to findings from other less industrialised countries.(Warren, Riley, Asma, Eriksen, Green and Blanton, 2000; Adelekan and Ndom, 1997; Adelekan, Abiodun, Obayan, Oni and Ogunremi, 1992; Camara, Wade, Hanne, Sow, Diofs, Sall, Bamsarr and Fall, 1994).

It also confirms a similar trend as reported by studies in older population in Kenya (Amayo, 1998; Odek-Ogunde and Pande –Leak, 1999).

In the present study the strongest correlates of lifetime tobacco use among pupils where peer pressure (66%) as 33% reported their friend used tobacco and that 31% pupils in their school used tobacco whereas 4% and 5% had been offered cigarette by friends and smoked with a friend. This implies that pupils who reported that their friends used tobacco product are more likely to have tried tobacco themselves. This difference with respect to own and friends smoking status might reflect the possibility that primary school pupils are optimistically biased with respect to own smoking status, thus attributing own socially undesirable behaviour to others.

Lack of parental guidance (57%) as many reported their fathers (35%), other relatives (35%) and teachers (64%) used tobacco. This signaling lack of role model, yet the role of perceived role model like parents, relatives, and teachers

have been found to have some influence over adolescence smoking (Hurt and Robertson, 1988).

Curiosity was (53%). This was because the pupils had seen many people using the tobacco products straight from home to school and also from the youth to the old hence their curiosity to test this product, which is also frequently advertised using many channels.

Free exposure to tobacco (49%) this probably because the division grows tobacco (64%) and family growing (11%) as 5% of the pupils from growing families reported having high chance of tasting tobacco earlier.

Lack of information on tobacco (48%) this low percentage could have been contributed by their knowledge of tobacco related health risk or dangers which was very high in all cases questioned above 62% and due to the fact that above 64% had talked with at least somebody about tobacco products. This therefore calls for programmes seeking to prevent smoking and tobacco initiation among primary school pupils and smoking cessation programmes should take into account the diverse arenas through which young people currently obtain anti tobacco message and strive to strengthen the full range of them. There is a need for the promotion of clear and consistent anti- tobacco message which should be supported by active involvement of parents, school teachers and other professionals and should be culture and gender specific.

Advertisements (47%) this was below the reported having seen or heard tobacco advertisement (88%) but above those who had object with cigarette brand name which they were using (34%) and having been offered free cigarette by tobacco

company 17%. This indicates that despite the majority of the pupils reporting having seen or heard advertisements (88%) of tobacco it did not have a lot of influence on them probably because it came from the companies sales representatives who were touring the tobacco farms in the division.

Adventurism (46%). This is so because by nature, young people are risk takers and also adventure seekers. They easily fall prey to the wrong notion that drugs are the answer to feelings of depression and hopelessness (Tabifor, 2000).

Boredom and frustration each had (45%). This might have been influenced by high academic demands of the 8.4.4 system which leaves the pupils with very little time to play and socialize.

This is because after school hours, which is officially 3:10p.m. the pupils still remain doing assignments and tuition hence reaching home very late, where parents also may demand them to do further study hence their mind is all academics which could lead to boredom and frustration and probably take tobacco as a solution.

Pressure from school work and rebellion each had (39%) this being the lowest reason for tobacco use because most of the pupils above 60% knew existing laws and policies on smoking except one "cigarettes are not sold to people below 18 years which had (18%).

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This indicates that this policy is not followed seriously as the others, resulting to pupils being not sure of it. This lowest percentage could also have been due to control measures being taken in school towards tobacco and smoking (61%). This

indicates that favorable attitudes towards tobacco control measures are positively associated with the decision to avoid smoking.

Collectively the data highlight the need for comprehensive tobacco prevention programmes targeting the social and environmental influences of both the family and the community.

Since the roles of perceived role models like parents, teachers, advertising and the kind of health information they have access to have been found to have some influence over adolescence smoking (Hurt and Robertson, 1988).

The present study found out that when it comes to school rules and regulation the pupils who smoke were violent and withdrawn (74%), disobedient (96%), perform very poor academically (86%), they do not accomplish assignment given by teachers (91%), do not attend school regularly, (95%) and 34% and 59% appeared very shabby, untidy and with bulging red eyes respectively.

In addition parents and community brought complains about them in school (68%). These finding confirms a similar finding as reported by studies in older populations in Kenya (Omino, 1985 and Onyango, 1985) .

The present study also revealed that the tobacco growing families are not Socio-economically stable. This was because despite reported higher percentage of having a lot of money after sale of tobacco (57%), all other indicators where low for example having enough food for their family was (40%), enough firewood from their farm (22%), tobacco being best crop for their farm (29%), affecting their pupils (65%), the knowledge of dangers of tobacco growing to the family (40%) and pupils intention to grow tobacco in future was the lowest (10%). This

indicates that pupils do not aspire to do what their families are doing at present but many aspire to continue with education (94%).

Figure 1, 2 and 3 gives histograms of tables 3, 4 and 5 respectively.

Figure 1 shows the histogram of the percentages given in table 3.

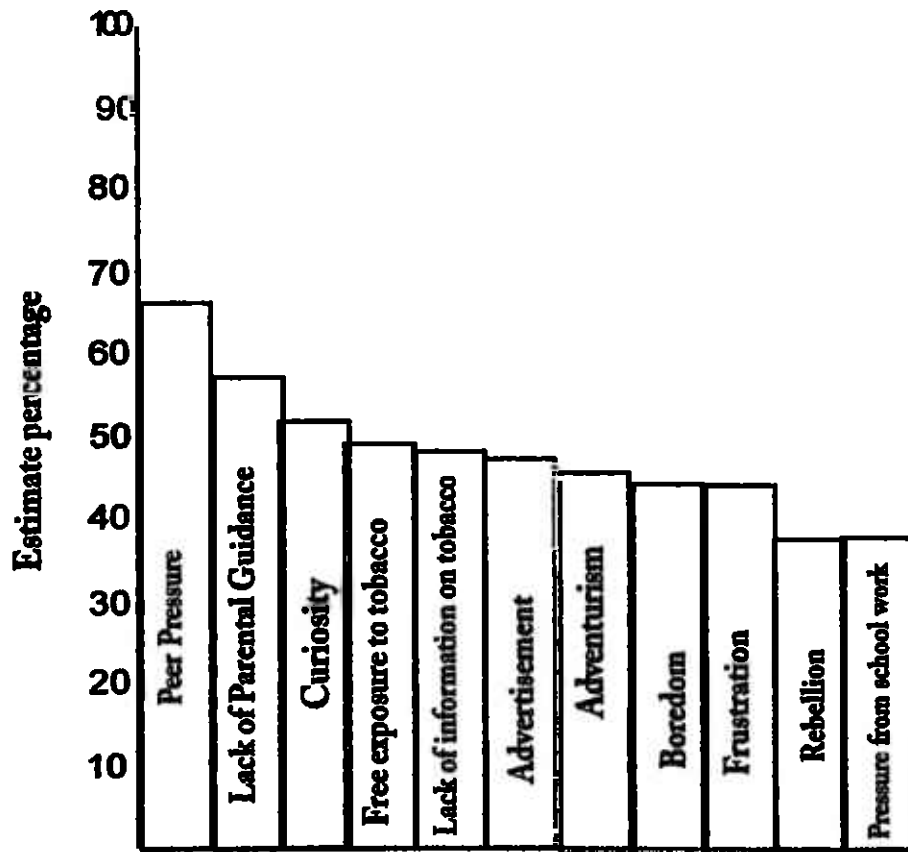


Figure 1: Histogram of reasons for tobacco use

Figure 2 shows the histogram of the percentages given in table 4.

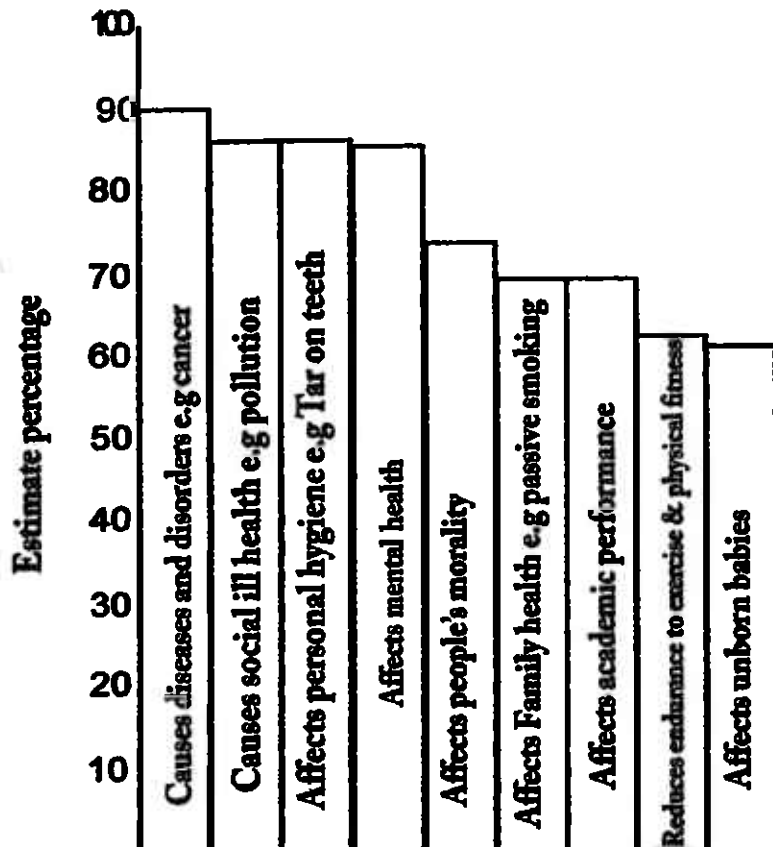


Figure 2: Histogram of tobacco health risks/dangers

Figure 3 shows the histogram of the percentages given in table 5.

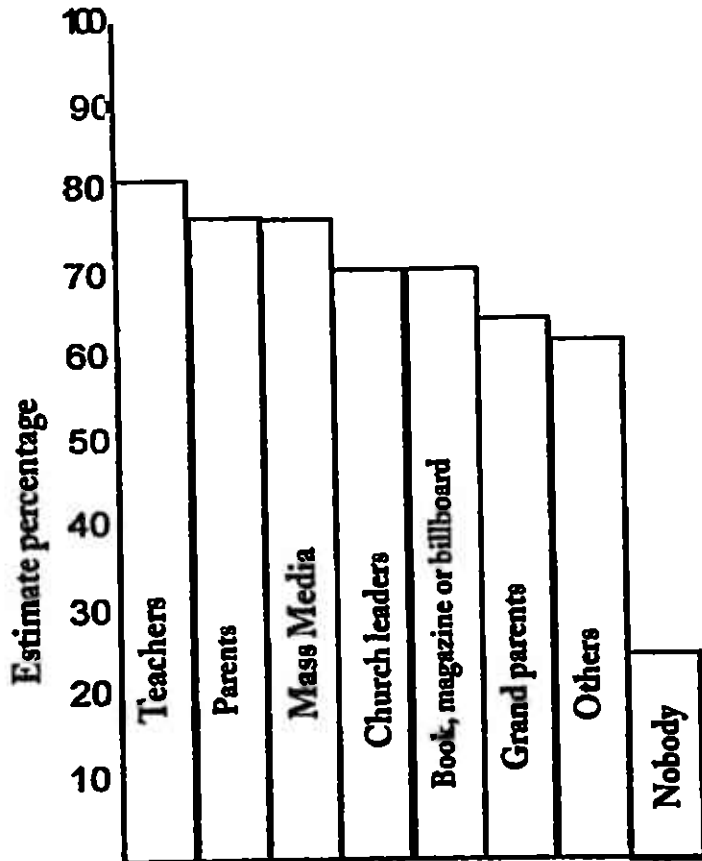


Figure 3: Histogram of tobacco source of information including talked, heard, seen or read.

Statistical Inference Calculations

The statistical inference calculations are shown below.

Estimation of population proportions

Where P = tobacco use, and Q = non tobacco use as used in binomial distribution according to Lucey (1987) in Quantitative techniques page 53 – 61.

$$P = 31\% = 0.31$$

$$Q = 1 - 0.31 = 0.69$$

Standard error of a sample proportion (Sps)

Is given by the formula

$$Sps = \sqrt{\frac{Pq}{n}}$$

where n is the total sample frequency response to tobacco use.

$$\begin{aligned} Sps &= \sqrt{\frac{0.31 \times 0.69}{466}} \\ &= 0.021424585 \\ &= 0.021 \end{aligned}$$

At 95% confidence level, we can say we are 95% confident that the population proportion is

$$Ps \pm 1.96 Sps$$

$$0.31 \pm 1.96 (0.021)$$

$$= 0.31 \pm 0.04116$$

$$= 0.26884 \text{ to } 0.35116$$

This means 27% to 35% of the pupils use tobacco.

Finite population correction factor which is given by the formula:

$$\sqrt{\frac{N-n}{N-1}}$$

Where N = population total

n = sample total response for tobacco use.

$$\begin{aligned} & \sqrt{\frac{2218-466}{2218-1}} \\ & = 0.888964062 \\ & = 0.889 \end{aligned}$$

This means that population proportion for tobacco use at 95% confident level with correction factor is:

$$\begin{aligned} & 0.269 \times 0.889 \text{ to } 0.351 \times 0.889 \\ & = 0.239141 \text{ to } 0.312039 \end{aligned}$$

This gives the correct population proportion for tobacco use among pupils in Kitui

Central division between 24% to 31%.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.

Summary

This study had the purpose of determining the level of and factors associated with initiation and current use of tobacco among primary school pupils in Kitui Central Division. The information was collected using a self-administered questionnaire with fixed response alternative which was constructed and administered in English, which is the language of instruction in all formal academic institutions in Kenya. The self-administered questionnaire was given to each pupil in their respective classrooms under supervision of the researcher. The respondents remained anonymous to protect the identities of those who participated, the sitting arrangement ensured confidentiality and also teachers were not allowed during the process, to enable the pupils answer freely.

Data from the returned questionnaires were coded, cleaned and entered into standard data processing software, statistical package for social sciences (S.P.S.S.). The proportions, frequencies and percentages were gotten and information presented in cross-tabulation while some was also given as histogram figures. The findings of this study were as follows:

The girls (51%) in the schools investigated were more than boys (49%).

Seventy four percent of the pupils investigated were 14 years or younger. Their mothers (38%) had higher education than their fathers (23%). More pupils spend their holidays in rural (71%) compared to those who go to town/urban (29%).

These finding points out that both parents and pupils are village dwellers hence

farming is a major financial activity. In this division tobacco being the major cash crop, this leaves pupils with high exposure to tobacco growing in the farms and also exposed to advertisements from tobacco companies sales representatives touring the tobacco farms with their vehicles which go giving pro-tobacco adverts and giving free items and tobacco samples.

The pupils exposure to tobacco use by various people was also very significant to their wanting to taste tobacco products. This was because they reported having seen their teachers smoke (64%), fathers (35%), other relatives (35%), friends (33%), pupils in their school (31%), their brothers and sisters (8%) and mother (2%). This signifies lack of good role models to be imitated by these young ones straight from home to school levels.

They also had a perception that boys (97%) use tobacco more than girls (3%) hence this translating to higher intake of tobacco by fathers than mothers later in life. This calls for protection of boy child since the culture and social sanctions does not protect them as it does to girl child. The same is also reported by other less industrialized countries (Warren, Riley, Asma, Eriksen, Green and Blanton, 2000).

More pupils tasted tobacco for the first time (5%) between 10 to 14 years, 2% at 15 years and 1% before the age of 10 years, this calls for introduction of tobacco subject early in life. The pupils also reported having smoked with their friends (5%), offered cigarettes by friend (4%), while (4%) bought or rolled on their own. This shows peer pressure has high influence.

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Reasons for tobacco use were many, ranging from peer pressure (66%), lack of parental guidance (57%), curiosity (53%), free exposure to tobacco (49%), lack of information on tobacco (48%), adventurism 46%, boredom and frustration each (45%), pressure from school work and rebellion each (39%). All these reasons need good addressing with active involvement of all stake holders ranging from parents, school teachers and other professionals.

The pupils had good knowledge of tobacco related health risks or dangers. This was because most pupils reported of being aware that tobacco causes diseases and disorders for example cancer (89%), causes social ill health for example pollution (86%), affects personal hygiene for example tar on teeth (86%), affects mental health (85%), affects pupils morality (74%), affect academic performance (68%), affects family health for example passive smoking (68%), reduces endurance to exercise and physical fitness (63%) and affects unborn babies (62%). All these tobacco related health risks or dangers need to be explained well to pupils and emphasized when being taught by teachers. If possible, the teachers should use teaching Aids which include video tapes, films, printed papers, drama and poems that is utilize all the senses of the pupils for the information to stick well.

The pupils got information of tobacco related risks from wide sources. The major reported source being the teachers (81%), parents and mass media of each (77%), church leaders and book, magazine or billboard each (72%), grand parents (66%), others (64%) and from nobody (26%). This calls for all these sources to be fed with right information either through seminars or community – based organizations. Teachers should be well trained on guidance and counseling, drug

and drug abuse and on how to disseminate the information appropriately, to these young age while looking at culture and gender specific.

The trained teachers should be deployed or posted to primary schools and the guidance and counseling department strengthened. This is to enable teachers handle these young ones before they start this habit.

Most pupils investigated admitted having heard or seen tobacco advertisements (88%), had objects with cigarette brand name on it, which they were using (34%) and had been offered cigarettes by representatives from tobacco companies (17%). This calls for discouragement of tobacco advertisement to young people. This is because they need more protection from these Pro-tobacco information and actions since their developmental stage is not mature to make informed choices hence if not protected they will get influenced and become easy prey to the message of advertisement.

Existing laws and policies on tobacco use were not new to pupils as they agreed smoking was not allowed in schools (92%), pupils were not allowed to smoke (85%), smoking was not allowed in public places (67%), pupils found smoking in school are expelled (60%) and cigarettes are not sold to people below 18 years (18%). These policies some need change for example the one to expel pupils should be replaced or modified to refer pupils first to guidance and counseling before the decision of expelling. The rest of the laws and policies need to be enforced to the people because most of them are violated.

Behaviour experienced by smoking pupils where all discouraging both to their fellow pupils, to teachers and community in general hence need to control cigarette use among pupils.

As per tobacco growing in the division it was high (64%), their family growing tobacco (11%) and this had an influence to starting using tobacco (59%). The family growing tobacco had more problems than benefits from the crop. Hence pupils intention to grow tobacco in future was negative.

Conclusion

In conclusion these results therefore constitute an instructive example of pupils tobacco use in kitui central division, an area currently growing tobacco.

This is also due to wide exposure to advertisement from tobacco sales representatives, who frequently tour the district.

Recommendations.

This calls for discouragement of tobacco growing in the division. This study recommends that future studies of adolescence tobacco use in other areas of Kenya, predominantly rural ones, should be done to provide even more information on tobacco use among pupils.

It also recommends that Media anti-tobacco message should be supported by active involvement of parents, school teachers and other professionals and should be culture and gender specific. Also programmes seeking to prevent smoking initiation among primary school pupils and smoking cessation programmes should take into account the diverse information sources, through which young

people currently obtain anti-tobacco messages and strive to strengthen the full range of them with right information.

Lastly guidance and counseling teachers should be deployed or posted to primary schools and the guidance and counseling department strengthened.

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Appendix 1**QUESTIONNAIRE FOR PRIMARY SCHOOL PUPILS.**

A study on assessing and explaining use of tobacco among primary school pupils in Kitui Central Division.

Date_____

Serial_____

Dear pupils,

A student with the University of Nairobi will carry out this study with you.

The questions will cover the issues of tobacco use among primary school pupils in Kenya. Your answers will be compared with those of other pupils of your age in other schools.

This questionnaire is for you only. Your name is not needed and all your answers will be kept strictly confidential. After you finish answering the questions only the investigator will collect the sheets from you. For the study to be useful, it is important that you answer each question very carefully. Feel free and it is my hope that you will enjoy filling the questionnaire.

INSTRUCTIONS

- This is not a test.
- There are no right or wrong answers
- Please choose the answer that is right for you and that describes your opinion best.
- Put a tick ✓ to the correct answer provided.
- Choose only one answer for each question or statement provided unless instructed otherwise.
- Please try to answer each question truthfully.

PART 1

Below are questions about yourself and your family. Please put a tick ✓ next to the correct choice given

1. Which is your zone?
 - a. Kalundu
 - b. Kyangwithya
2. What is your sex?
 - a. Boy
 - b. Girl
3. What year were you born?
 - a. Before 1989
 - b. 1989
 - c. After 1990
 - d. 1990

4. What is your religion?

- a. Catholic
- b. Protestant
- c. Muslim
- d. Others (specify)

5. Where do you spend most of your holidays?

- a. Urban/town
- b. Rural/village

6. How do you feel about school at present?

- a. I like it very much
- b. I like it a bit
- c. I do not like it very much
- d. I do not like it at all

7. How was your performance last term?

- a. Very good
- b. Good
- c. Fair
- d. Poor
- e. Very poor

8. Are your parents alive?

- a. Both parents are alive
- b. Only mother is alive
- c. Only father is alive
- d. Both parents are dead
- e. Born of a single parent

9. Up to what level did your parent go to school (tick for each)

	Father	Mother
a. did not go to school		
b. adult education(ngumbaru)		
c. primary		
d. secondary		
e. College		
f. University		
g. I do not know		

10. What do you think is the state of your health?

- a. Excellent c. Average e. Very poor
 b. Good d. Poor

11. What do you think will be the state of your health in the future?

- a. Excellent
 b. Good
 c. Average
 d. Poor
 e. Very poor

12. What do you think you will be doing when you finish primary school?

- a. Go to secondary f. I do not know
 b. Go to a technical school / College g. Others(specify)
 c. Go into farming
 d. Get a job
 e. Be unemployed

PART TWO

Below are questions about tobacco products. Please choose the answer that fits you the best and put a tick next to it

1. Do you know tobacco?
 - a. Yes
 - b. No
2. Does the division you come from grow tobacco?
 - a. Yes
 - b. No
 - c. I do not know
3. (a) Does your family grow tobacco?
 - a. Yes
 - b. No
 - c. I cannot tell

(b) If yes who?

 - a. Parents
 - b. Sister or brother
 - c. Grandparents
 - d. Close relatives
4. Does your division have tobacco processing plants/drying area?
 - a. Yes
 - b. No
 - c. Do not know

5. Have you ever tried to smoke cigarettes even once?

- a. Yes
- b. No

6. How often do you smoke cigarettes?

- a. Every day
- b. Every week
- c. Occasionally
- d. I do not smoke

7. Have you ever tried to use any other tobacco products e.g. (chewing tobacco, snuff, pipes, extracts) even once?

- a. Yes
- b. No

If yes which one?

- a. Chewing tobacco
- b. Snuff
- c. Pipes
- d. Extracts

8. How often do you use any other type of tobacco products mention on 7 above?

- a. Every day
- b. Every week
- c. Occasionally
- d. I do not use these tobacco products

9. Have you ever smoked, sniffed or chewed any other tobacco product in the past 30 days?

- a. yes
- b. no

If yes which one?

- a. Smoked
- b. Sniffed
- c. Chewed

10. How old were you when you first started smoking?

- a. less than 10 years
- b. 11 – 12 years
- c. 13 – 14 years
- d. 15 years and above
- e. I do not smoke

11. If you smoke, how many cigarettes do you smoke in a week?

Give number _____

12. Whom do you usually smoke with?

- a. my friends
- b. sister /brother
- c. alone
- d. others (specify)
- e. I do not smoke

13. Where do you usually get the tobacco that you chew, sniff or smoke?

- a. From my friends
- b. I buy it
- c. I roll from the farm
- d. From my brother/ sister
- e. From my parents
- f. Others (specify)
- g. I do not use tobacco

14. Do you have family members who chew, smoke, or sniff tobacco?(Tick \checkmark once for each.)

	YES	NO	I DO NOT KNOW
Father			
Mother			
Brother			
Sister			
Others(Specify)			

15. Are you aware of some school pupils who use tobacco in your school?

- a. Yes
- b. No

16. How many of your friends do you believe smoke, chew or sniff tobacco?

- a. None
- b. A few
- c. Many
- d. All
- e. I do not know
- f. I do not have any friend.

17. Have you ever seen any of your teachers smoke or use tobacco products even once?
- Yes
 - No
18. Between boys and girls, who would you say uses these tobacco products the most?
- Boys
 - Girls
19. Which one of these statements best describe you?
- I have never smoked, chewed or sniffed any tobacco products
 - I have only tried to smoke, chew or sniff tobacco products only once or twice
 - I do not smoke cigarettes but use other form of tobacco products
 - I smoke cigarettes but not everyday
 - I usually smoke between one and five cigarettes every day
 - I usually smoke more than five cigarettes every day

PART THREE

Below you will find statements about reasons for tobacco use, dangers / risks of tobacco use and information source about tobacco products.

The questions are arranged differently so please read each one carefully before you answer. (Tick ✓ only once for each option) If you neither disagree nor agree with the options offered fill in "neither option."

1.

	STRONGLY AGREE	AGREE	NEITHER OPTIONS	STRONGLY DISAGREE	DISAGREE
WHAT DO YOU THINK MAKES MOST PUPILS START SMOKING?					
Peer Pressure					
Curiosity					
Adventurism					
Pressure from school work					
Boredom					
Frustration					
Advertisements					
Rebellion					
Lack of parental guidance					
Free exposure to tobacco					
Lack of information on tobacco					

2.

	STRONGLY AGREE	AGREE	NEITHER OPTION	STRONGLY DISAGREE	DISAGREE
WHAT ARE THE DANGERS/RISKS OF SMOKING?					
Affects mental health					
Causes social ill health e.g. pollution					
Causes diseases and disorders e.g. cancer					
Affects personal hygiene e.g. tar on teeth					
Reduces endurance to exercise and physical fitness					
Affects unborn babies					
Affects family health e.g. passive smoking					
Affects academic performance					
Affects pupils morality					

3

	STRONGLY AGREE	AGREE	STRONGLY DISAGREE	DISAGREE
WHO USUALLY TALKS TO YOU ABOUT TOBACCO PRODUCTS?				
Parents				
Teachers				
Church leaders				
Grandparents				
Mass media e.g. T.V, Radio				
Book magazine or billboards				
Others (specify)				
No body				

4. Have you ever seen or heard any advertisements on cigarettes?

- a. Yes b. No

5. How did you feel about the advertisement?

- a. Good d. Modern g. Tempting
b. Bad e. Glamorous
c. Funny f. Mature

1. Where did you get the advertisement?

- a. The newspapers
b. On television
c. Through the radio
d. On bill boards
e. At sporting events
f. Sales promotion.

7. Do you have any objects e.g. caps, t-shirts, bags, calendar, key holders, etc with cigarette brand names?

- a. Yes
b. No

8. If yes how often do you use the object?

- a. Every day c. Occasionally
b. Once a week d. Never

9. Have people from tobacco companies ever offered you free cigarettes?

- a. Yes b. No

10. Below are questions on existing laws and policies on smoking. Give your opinion as true or false.

	FALSE	TRUE
SMOKING IS NOT ALLOWED IN SCHOOLS		
PUPILS ARE NOT ALLOWED TO SMOKE		
STUDENTS FOUND SMOKING IN SCHOOL ARE EXPELLED		
SMOKING IS NOT ALLOWED IN PUBLIC PLACES		
CIGARETTES ARE NOT SOLD TO PEOPLE BELOW 18 YEARS		

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PART 4

The following are questions about behavior experienced by pupils who smoke.

Tick the correct answer for you.

1. How do pupils who smoke relate with other pupils?
 - i. Popular
 - ii. Violent
 - iii. Withdrawn
2. How do pupils who smoke relate with teachers?
 - i. obedient
 - ii. disobedient
 - iii. violent
 - iv. withdrawn

3. How do pupils who smoke perform academically?
 - i. good
 - ii. fair
 - iii. poor
 - iv. very poor
4. How do pupils who smoke generally appear in school?
 - i. Very shabby and untidy
 - ii. Very neat and attractive
 - iii. Smart
 - iv. Bulging red eye
5. Do pupils who smoke attend school regularly?
 - i. Yes
 - ii. No
6. Do pupils who smoke do the assignments given by teachers?
 - i. yes
 - ii. no
 - iii. Partially
7. Do parents and community members bring complaints to school about pupils' behavior?
 - i. Yes
 - ii. No
 - iii. Can not say.

8. Which offence is commonly committed by pupils outside the school compound?

- i. Fighting
- ii. Theft
- iii. Robbery
- iv. Miscellaneous indiscipline
- v. Others (specify)

PART FIVE.

Below are questions seeking your opinion on tobacco growing and the control measures.

Indicate the best response.

1

	YES	NO	I DO NOT KNOW
WHOM DO YOU THINK TASTES TOBACCO PRODUCTS EARLIER			
a) Pupils from tobacco growing families			
b) Pupils from non-tobacco growing families			

2

	YES	NO	I DO NOT KNOW
DO FAMILIES WHICH GROW TOBACCO			
Have a lot of money after sale?			
Have enough food for their family?			
Have enough firewood from their farm?			
Have the best crop for their farm?			
Affect their pupils/children?			
Know the dangers of tobacco growing?			

3. When you grow to age, do you intend to grow tobacco as a cash crop?

- a. Yes
- b. No
- c. I do not know

4. Are there control measures being taken in your school toward tobacco and smoking?

- a. Yes
- b. No
- c. I do not know

5

WHICH CONTROL MEASURE IS COMMONLY USED IN YOUR SCHOOL?	YES	NO	I DO KNOW	NOT
Suspension				
Expulsion				
Guidance and counseling				
Parental involvement				
Invitations of experts				
Video shows				
Taken to youth centers				
Taught in class by teachers				
Inviting church organizations				
Others (specify)				

Please write down any other additional comments you may have on the topic covered in this questionnaire.

Thank you for filling the questionnaire co-operatively.

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Appendix II

Table of randomly selected five digit numbers

19105	04371	50501	82874	51551
93618	05313	56221	72646	71647
44222	04630	55619	15213	78739
11200	75277	50685	93795	15481
17157	05055	89564	10002	68567
87298	05586	40393	63862	64961
10486	48767	75692	31559	08527
12634	06736	73764	02759	40153
37677	06351	41827	42673	97490
34212	76832	14525	43397	62403
13162	87563	47242	19617	06022
04194	38165	75362	95681	26841
67928	06935	98115	73596	81539
73000	85457	76267	28089	91609
49519	73289	08001	34115	09064
35492	69197	09095	07418	01989
40393	87912	72284	31134	15162
61915	37213	88468	95241	29761
98365	71328	59198	29584	18046
67399	17606	33471	38829	06374
03082	56233	21813	61898	79256
06488	11750	22365	74786	44807
76360	49632	66819	02632	23865
93603	65579	49110	12051	49737
99426	91487	54433	52869	02366
79068	71351	46923	02916	93754
08102	89812	81313	14423	39897
03056	74601	06347	69175	33986
40357	08874	4879	25952	82750
37486	09789	51309	51425	78584
42645	59568	33225	89746	91437
84376	90706	29030	22514	71768
33671	27009	28424	89276	60826
68975	00929	96956	80525	70206
10213	64222	59310	58009	96259
18013	96399	15834	79095	36100
27046	75134	49159	71127	76224
17148	57022	79568	12715	06339

Source: Mugenda CM and Mugenda AG (1999) Research Methods in Education Nairobi Kenya. ACTS Press Page 247.

Appendix III

Ministry of Education, Science and Technology

Research Permit

TELEGRAMS "EDUCATION" Kitui
Telephone: Kitui (044) 22759
When replying please quote

DISTRICT EDUCATION OFFICE
P.O. Box 35
KITUI.

DATE: 11/06/2004

Ref No.

TO WHOM IT MAY CONCERN

The bearer of this letter is a Post Graduate student in Nairobi University on a Research mission. Please do accord her any assistance deemed necessary should she approach your institution.

Thank you for co-operating.

NAPOLEON K. WASYOMWII
FOR: DISTRICT EDUCATION OFFICER
KITUI.