

**REPORT ON THE RESULTS OF THE GLOBAL
YOUTH TOBACCO SURVEY IN ZIMBABWE
(GYTS ZIMBABWE)**

**HARARE & MANICALAND REGIONS, ZIMBABWE
1999 - 2000**

**REPORTED BY
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INTRODUCTION

WHO Resolution

Between 1970 and 1995, WHO adopted 14 resolutions on the need for both national and international tobacco control policies. Four of the 14 resolutions are relevant to the UNF-project—GYTS survey. Member states were encouraged to implement comprehensive tobacco control strategies that contain the following:

1. Measures to ensure that non-smokers receive effective protection, to which they are entitled, from involuntary exposure to tobacco smoke.
2. Measures to promote abstention from the use of tobacco so as to protect children and young people from becoming addicted.
3. The establishment of programmes of education and public information on tobacco and health issues, including smoking cessation programmes, with active involvement of the health professionals and the media.
4. Monitoring of trends in smoking and other forms of tobacco use, tobacco-related disease, and effectiveness of national smoking control action.

Public Health Impact

Despite widespread knowledge of the harm caused by smoking, only modest success has been achieved in global tobacco control initiatives. WHO estimates that there are currently 3.5 million deaths a year from tobacco, a figure expected to rise about 10million by 2030. By that date, 70% of those deaths will occur in developing countries.

Tobacco use is considered to be one chief preventable cause of death in the world. WHO is concerned about the decreasing age of smoking initiation. Data revealed that in many countries, the median age of smoking initiation was under the age of 15. This is of particular concern, since starting to smoke at younger ages increases the risk of death from a smoking-related cause. Among those who continue to smoke throughout their lives, about half can be expected to die from a smoking-related cause, with half of those deaths occurring in middle age. Therefore, adolescents and school-aged children should be a primary focus for intervention strategies. Carefully designed strategies should provide a clear picture of the risk factor behaviors of young and school-aged children which then can be used to set up more effective and comprehensive tobacco control policies.

Tobacco Use in Zimbabwe

Tobacco is the main foreign currency earner in Zimbabwe, accounting for 33% of Zimbabwe's agricultural earnings and 30% of foreign earnings. The three main types of tobacco grown in Zimbabwe are Virginia (flue-cured), Burley (cured) and Oriental. Tobacco accounts for about 12%

of workforce. Tobacco use is significantly prevalent, even among the youth. Total cigarette consumption rose from 1 billion in 1995 to 1.05 billion in 1997. The prevalence of tobacco smoking ranges from 19% to 35% and males smoke more than twice as much as women and the smoking rates increase with age. According to a study amongst young people done in Harare, prevalence was 16% among children under 14 years, 21% among 15 – 16 year olds, 28% among 17 – 20 year olds and 33% among over 20 years olds.

Rules & regulations for tobacco control are mainly for protection and promotion of the growing of tobacco. However, the Children's Protection & Adoption Act [Chapter 5:06 of the Statute Law of Zimbabwe] prohibits the sale of liquor, tobacco and drugs to children (below age 18). There has been a health policy since October 1995 for the control of tobacco, which includes a health clause that reads "Smoking may be hazardous to your health". This warning clause and in addition tar & nicotine levels in cigarettes are displayed on every cigarettes packet. Smoking was banned in hospitals & health clinics in 1992, and theatres, cinemas, supermarkets and all pharmacy outlets do not allow smoking on their premises. All local Zimbabwean flights do not allow smoking during flying. Some of the local bus companies (e.g. ZUPCO) forbid smoking on their buses.

Additionally, Zimbabwe commemorates World-No-Tobacco Day and there are regular radio & television educational talks, to sensitise people on the effects of tobacco smoking. The Ministry of Health & Child Welfare has launched awareness campaigns to the public, school education groups, youths- in & out of school, pregnant women. There are however, some disparities in the dissemination of information on the dangers of tobacco as well as gaps in information and behaviour change.

BACKGROUND TO THE GLOBAL YOUTH TOBACCO SURVEY

UNF Project

The Tobacco Free Initiative (TFI/WHO) has recently been awarded by the United Nations Foundations for International Partnerships (UNFIP) what is probably the largest single tobacco prevention grant to initiate a joint project with UNICEF titled “Building alliances and taking action to create a generation of tobacco free children and youth”. The aim of the project is to pool together the evidence, technical support, and strategic alliances necessary to positively address the negative impact of tobacco and to encourage and support children and adolescents in leading healthy and active lives free of tobacco. The project will be focused in a small group of developing countries, one per WHO region and will draw upon the combined technical expertise and operational resources of a number of UN agencies—in particular WHO, UNICEF and the World Bank. The agencies will work together with the global scientific community, government and non-government agencies, institutions and systems within countries, the media, and with young people to show that together they can make a difference in this important public health issue.

The project is conceived as a dynamic and interactive process, whereby the activities and products of each phase will be used to inform and guide subsequent activities. The project will consist of three distinct overlapping phases. The first phase will focus on harnessing the evidence for action: synthesizing the existing evidence from countries, some of which may participate in subsequent phases; undertaking new areas of research to support actions; and establishing the research-based evidence for developing future actions.

The second phase will be the activating phase. Country Activating Groups (CAGs) with broad membership, will be formed in each of the participating countries as the coordinating and implementing mechanisms at the country levels to select and develop the components of a comprehensive country-based approach to addressing tobacco use among children and young people. Opportunities to promote the exchange of experiences and issues between countries and global activities will be developed and strengthened.

The third phase will involve taking the project to scale: producing and disseminating resources; strengthening regional capacity to sustain activities; integrating the products and results of the project into ongoing tobacco control work at the national, regional and global levels; transferring technology and experience between countries and regions; and strengthening cooperation and collaboration at all levels.

Seven countries have been selected to participate in the activating phase (Phase 2) of this project: China, Jordan, Sri Lanka, Fiji, Venezuela, Zimbabwe and Ukraine. As a first step in this Phase,

WHO and CDC organized a technical meeting in 1998 to plan for the development and implementation of an initial baseline assessment of youth tobacco use in each country using a school survey instrument: the Global Youth Tobacco Survey.

The GYTS

The GYTS is a school based tobacco specific survey, which focuses on adolescents aged 13 – 15 (Forms 1 – 3). It assesses student's attitudes, knowledge and behaviors related to tobacco use and ETS exposure, as well as youth exposure to prevention curriculum in school, community programs and media messages aimed at preventing and reducing youth tobacco use. The GYTS provides information on where tobacco products are obtained and used, information related to the effectiveness of enforcement measures. School surveys are useful tools in gathering data as they are relatively inexpensive and easy to administer, tend to report reliable results, and refusals are significantly lower than in household surveys. The most common research approach for this specific population has been the self-administered questionnaire. Therefore, all the above, reasonably justify why a school-based survey has proved to be most appropriate, hence selected for the UN project on Youth and Tobacco.

Objectives of the GYTS

The GYTS is a school based tobacco specific survey that focuses on students aged 13 – 15 years. The objective of this is two fold:

- 1) To document and monitor the prevalence of tobacco use including: cigarette smoking and current use of smokeless tobacco, cigars or pipes
- 2) To understand and assess students' attitudes, knowledge and behaviors related to tobacco use and its health impact, including: cessation, environmental tobacco smoke, media and advertising, minors' access and school curriculum

The GYTS will attempt to address the following issues

- Determine the level of tobacco use
- Estimate the age of initiation of cigarette use
- Estimate levels of susceptibility to become cigarette smokers
- Exposure to tobacco advertising
- Identify key intervening variables, such as attitudes and beliefs on behavioral norms with regard to tobacco use among young people which can be used in prevention programmes
- Assess the extent to which major prevention programmes are reaching school-based populations and establish the subjective opinions of those populations regarding such interventions

METHODS

The 1999 Zimbabwe GYTS was a school based cross-sectional survey, which employed a two stage cluster sampling design to produce two representative samples from Harare and Manicaland Regions, which were the purposively selected regions for the survey.

Zimbabwe is divided into 10 administrative regions. Manicaland region is predominantly rural and commercial farming area, and Harare is mainly urban, and is the capital city of Zimbabwe.

Sample Description

Separate samples were drawn for the Harare and Manicaland Regions. For each of the regions, all schools containing Forms 1-3 (private and public) were included in the sampling frame.

The table below shows the total secondary schools and enrolments for the two regions

<i>Region</i>	<i># of Secondary</i>	<i>Total Enrolments</i>	<i>Total Enrolments (Forms 1 - 3)</i>	<i>% Forms 1 -3</i>
Harare	73	99 906	73 005	73.07
Manicaland	251	133 534	104 439	78.21

The number of secondary schools in both Harare and Manicaland represent 21% of all secondary schools in the country, the enrolments 28% and Forms 1 to 3 also 28% of the country's Forms 1 to 3 enrolments.

Within each region a two-stage cluster sample design was used to produce a representative sample of students in these schools. The 1st stage-sampling frame consisted of all schools containing any of the Forms 1, 2 and 3. Schools were selected with the probability proportional to school enrollment size. Fifty-seven schools were selected, twenty-four from Harare and thirty-three from Manicaland.

The 2nd sampling stage consisted of systematic equal probability sampling (with a random start) of classes from each school that participated in the survey. All Form 1 to 3 classes in the selected schools were included in the sampling frame. All students in the selected classes were eligible to participate in the survey. Number of eligible classes ranged from 3 to 60 in schools sampled and the number of students in a class ranged from 35 to 80.

The Questionnaire

A group of experts on tobacco addiction from the first group of countries selected to undertake GYTS, and staff members of WHO/TFI and UNICEF, wrote the 57 questions of the “core” part of GYTS. In addition, Zimbabwe developed 30 more questions, some general socio-demographic

questions, questions on alcohol consumption and use of other substances (dagga, mbanje and glue). These additional questions were put together by a team of researchers from WHO, Ministry of Health and Child Welfare, UNICEF and Blair Research Institute, the institution contracted to carry out the survey.

Data Collection

Data collection was coordinated by Blair Research Laboratories. Before data collection, trips to the schools were undertaken in order to:

- Obtain permission from headmasters to conduct the surveys
- Obtain number of eligible classes for each school in order to facilitate sampling of classes
- Make logistical arrangements for survey administration
- Obtain information on best possible routes to access schools and also which schools fall on the same route or geographical area

Headmasters were briefed on the objectives of the survey, how the survey was to be administered and the procedures that were to be employed to ensure anonymity & confidentiality for students & school.

During data collection, survey procedures were designed to protect the students' privacy by allowing for anonymous and voluntary participation. The self-administered questionnaire was administered in the classroom. Students recorded their responses directly on an answer sheet that could be scanned by a computer. The questionnaire contained 85 multiple-choice questions and approximately 30 minutes were allowed for completion of the questionnaire.

Data collection was done between the 13th and 24th of September 1999, with Harare completed by the 14th and Manicaland by the 24th. 12 trained enumerators were involved in administering the questionnaire.

Analysis

For the analysis, a weighting factor was applied to each student record to adjust for non-response and the varying probabilities of selection. The programs SUDAAN and Epi-Info were used to compute rates and 95% Confidence Intervals for the estimates. A weight was associated with each questionnaire to reflect the likelihood of sampling each student and to reduce bias by compensating for differing patterns of non-response. The weight used for estimation is given by:
$$W=W1*W2*f1*f2*f3*f4$$

Where,

W1 = the inverse of the probability of selecting the school

W2 = the inverse of the probability of selecting the classroom within the school

f1 = a school-level non-response adjustment factor calculated by school size category (small, medium, large)

f2 = a class-level non-response adjustment factor calculated for each school

f3 = a student-level non-response adjustment factor calculated by class

f4 = a post stratification adjustment factor calculated by form

RESULTS

A total of 2254 questionnaires were completed for both Harare and Manicaland. 24 schools were sampled in Harare and 1080 students were sampled from these schools but 896 completed the questionnaires, giving a response rate of 83%. 33 schools were sampled in Manicaland, 1514 students were sampled from these schools and 1358 questionnaires were satisfactorily completed, giving a response rate of 89.7%.

Background Characteristics of Respondents

Sex, age, form and type of residential area for students - Harare and Manicaland regions, Zimbabwe

Characteristic		Manicaland n (%)	Harare n (%)
Total		1358	896
Sex	Male	633 (48.7)	419 (47.6)
	Female	666 (51.3)	454 (52.4)
Form	One	412 (31.6)	332 (35.9)
	Two	402 (29.6)	215 (24.0)
	Three	493 (38.7)	333 (40.2)
Age	<12	103 (7.8)	33 (3.6)
	13	114 (8.6)	166 (17.6)
	14	236 (17.2)	238 (25.3)
	15	350 (25.7)	217 (25.0)
	16+	539(40.8)	237 (28.5)
Type of residential area	High Density	322 (24.2)	439 (51.6)
	Low Density	336 (24.8)	312 (33.9)
	Communal Area	488 (36.9)	68 (7.6)
	Commercial Farm	137 (10.4)	30 (3.3)
	Other	51 (3.8)	34 (3.7)

There was a fair representation of male and female students in both regions. There were significant differences ($t=6.084$, $p=0.000$) in the age distributions between the two regions, with Harare having a slightly younger population of Forms one to three, with a mean age of 14.56, and 14.94 for Manicaland. There were also significant differences in ages between males and females for both regions (Harare $t=4.84$, $p<0.05$ and Manicaland $t=5.86$, $p<0.05$). Male students were significantly older than their female counterparts in both regions.

As mentioned earlier and also seen from the table above, students in Harare were predominantly from urban areas, 85.5% (adding high density and low density), compared to 49% in Manicaland. Combining commercial and communal areas, 47.3% in Manicaland were from these areas and 10.9% for Harare. These percentages are important in explaining some of the differences in the findings, especially access and exposure to information.

Prevalence

% Students age 13 – 15 who used tobacco – Manicaland & Harare Regions, Zimbabwe

Region		Ever smoked cigarettes	Current Use			1 ST smoked cigarettes before age 10
			Cigarettes	Other Tobacco Products	Any Tobacco Products	
		%	%	%	%	%
Manicaland	Sex: Male	29.0	12.6	15.8	23.0	21.0
	Female	16.3	9.7	15.3	20.0	22.1
	Form: One	20.3	13.3	19.3	25.1	18.6
	Two	19.7	9.6	13.0	19.1	20.8
	Three	26.6	10.7	14.5	20.4	23.2
	Age: <12	32.9	15.9	27.4	34.5	40.3
	13	20.1	15.1	16.3	23.9	79.6
	14	23.6	11.7	12.1	18.7	34.1
	15	18.3	7.3	12.9	16.7	22.5
	16+	24.8	12.6	16.7	23.7	13.2
Harare	Sex: Male	30.1	11.4	12.4	21.5	30.3
	Female	21.5	10.1	10.1	17.2	29.4
	Form: One	21.0	9.3	9.7	16.5	38.5
	Two	40.9	19.0	10.5	25.7	21.2
	Three	21.5	8.5	12.6	18.5	29.8
	Age: <12	38.6	27.6	16.2	36.2	56.5
	13	21.0	5.0	7.3	11.3	52.0
	14	31.4	16.4	7.6	20.8	24.3
	15	25.3	9.0	13.1	19.9	16.6
	16+	22.9	10.5	14.4	21.2	34.6

Current cigarette smokers, described as those who had smoked cigarettes on 1 or more days in the past 30 days from the day of interview, were quite high, 12.6% for boys and 9.7% for girls and 11.4% for boys and 10.1% for girls, for Manicaland and Harare respectively. The differences in current cigarette smokers between girls and boys and between regions were not significant at the 95% Confidence Interval. The percentages of those that had ever used any form of tobacco in the past 30 days, were even higher, 22% for Manicaland and 19.5% for Harare. The percentages of those that had used any form of tobacco in the past 30 days were higher amongst the younger students (those aged less than 12 years), for both regions. However, the totals for this agegroup should be noted, 33 for Harare and 103 for Manicaland. Other forms of tobacco included chewing tobacco, snuff, dip, cigars and pipes.

The percentages of students who had ever smoked cigarettes were quite high for both regions, 23.0% for Manicaland and 25.8% for Harare. Male students were more likely to have ever tried cigarette smoking, 30.1% (95% C.I. [23.2,37.0]) than their female counterparts 21.5% (95% C.I. [17.5,25.5]) for Harare and 29.0% (95% C.I. [23.4,34.6]) and 16.3% (95% C.I. [11.4,21.2]) for males and females respectively for Manicaland. The differences in the prevalence between male and female students were especially significant in Manicaland.

Of the students that were reported to have ever tried smoking, 21.3% had tried before the age of 10 for Manicaland and 29.4% for Harare. Form 1 students were more likely to have tried smoking before the age of 10, than both the Form 2s and 3s, but the differences were not significantly different at the 95% Confidence Interval. The proportion of students who had first tried cigarette smoking before the age of 10 between Harare and Manicaland were not significantly different at the 95% C.I., [16.0, 26.6] for Manicaland & [23.0, 35.8] for Harare.

Access

% Students age 13 – 15 who currently smoke cigarettes by where they usually smoke and how they obtain their cigarettes - Manicaland & Harare Regions, Zimbabwe

		Usually smoke at home	Usually smoke at school	Usually smoke at a friend's place	Bought cigarettes in a store	Bought cigarettes & were not refused because of age
		%	%	%	%	%
Manicaland	Sex: Male	14.0	20.8	20.1	28.0	57.4
	Female	24.9	6.1	19.6	43.9	47.5
	Form: One	21.6	10.0	18.9	24.8	37.0
	Two	24.4	16.3	16.6	39.5	49.4
	Three	12.0	21.6	23.4	37.8	61.1
	Age: <12	23.8	24.8	12.3	26.8	37.5
	13	35.2	13.7	10.9	42.9	49.7
	14	20.5	18.9	14.9	33.5	64.3
	15	25.2	11.6	18.5	39.1	58.6
	16+	10.6	14.5	26.2	30.4	48.4
Harare	Sex: Male	23.9	10.4	25.6	49.4	61.0
	Female	20.5	0	23.9	37.8	77.0
	Form: One	25.9	0	23.8	35.0	73.9
	Two	22.6	8.4	16.7	46.7	71.6
	Three	15.8	4.9	36.5	49.3	63.8
	Age: <12	19.6	0	18.7	33.5	47.4
	13	35.9	0	23.2	24.1	75.0
	14	20.9	2.9	24.1	50.7	84.3
	15	28.0	7.4	17.5	52.2	62.5
	16+	13.1	8.0	34.1	38.5	64.0

Places where students usually smoked varied, as shown above. Most of the younger students usually smoked at home, compared to smoking at school and at a friend's place. On the other hand, the majority of older students smoked at a friend's place than at their own homes or at school.

Looking at where students frequently smoke by sex, for Manicaland 20.8% (95% C.I. [10.7, 30.9]) of males smoke at school, while 24.9% (95% C.I. [13.6, 36.2]) of females usually smoke at home. For

Harare, 25.6% (95% C.I. [13.5, 37.7] of males usually smoke at a friend's place and 23.9% [7.5, 40.3] of females also usually smoke at a friend's place.

On average, nearly a third of the current smokers get their cigarettes from a store, although the proportions were slightly higher for Harare than Manicaland between sexes, ages and forms. Overall 44.7% of current smokers in Harare bought their own cigarettes from a store as compared to 34.1% for Manicaland. The differences are however not significant at the 95% Confidence Interval.

A huge proportion of current smokers bought cigarettes and were not refused because of their age. The majority of those that were not refused were in Harare as compared to Manicaland, for the different sexes, ages and forms. For Harare, 69.7% of students bought cigarettes and were not refused because of their age. 51.7% were not refused in Manicaland. For Harare, more females were not refused (77%) as compared to males (61%) and in Manicaland it was the opposite, more males were not refused (57.4%) as compared to females (47.5%). In Harare more students in the lower form (Form 1, 73.9%) were not refused compared to those in the higher form (Form 3, 63.8%). In Manicaland more students in the higher form (Form 3, 61.1%) were not refused compared to the lower form (Form 1, 37.0%).

Cessation

% Students age 13 – 15 who currently smoke cigarettes but desire to stop and attempt to stop smoking - Manicaland & Harare Regions, Zimbabwe

		Desire to stop	Tried to stop	Able to stop smoking if wish to
		%	%	%
Manicaland	Sex: Male	73.9	64.2	70.8
	Female	66.6	53.6	58.0
	Form: One	84.7	40.3	72.8
	Two	48.5	58.4	65.6
	Three	71.9	77.3	62.7
	Age: <12	61.3	28.1	66.6
	13	69.6	46.3	73.2
	14	67.9	59.0	69.5
	15	59.1	54.5	76.8
	16+	78.6	73.8	57.3
Harare	Sex: Male	70.9	38.0	84.3
	Female	64.7	57.4	71.8
	Form: One	61.7	55.2	74.0
	Two	63.4	47.1	78.0
	Three	78.4	46.5	76.0
	Age: <12	100	0	0
	13	100	100	80.4
	14	58.4	40	65.8
	15	74.4	37.7	88.9
	16+	66.9	77.9	100.0

According to studies, once a person starts smoking, it becomes difficult to stop. This survey therefore tried to establish among students who smoked; how many had the desire to stop and how many had even tried to stop smoking. Of the current smokers in Harare, 66.2% (95% C.I. [50.5, 81.9]) wanted to stop smoking now and 49.1% (95% C.I. [34.7, 63.5]), had even tried to stop in the past year. Of the current smokers in Manicaland, 70.6% (95% C.I. [62.6, 78.6]) wanted to stop smoking now and 60.3% (95% C.I. [49.2, 71.4]) had even tried to stop smoking in the past year. These figures show that of the current smokers who desire to stop, nearly three quarters, from both regions, had tried but had not succeeded.

On the contrary, most of these students believe they can stop smoking if they wish to, as can be seen from the table above. In Harare, 76.3% of current smokers said they could stop smoking if they

wanted and 66.1% from Manicaland. There were no big differences between regions, gender, forms and ages.

Knowledge and Attitudes

% Students age 13 – 15 who know about the dangers of tobacco and attitudes towards smoking, for current and never smokers - Manicaland & Harare Regions, Zimbabwe

		Current smokers: Tobacco is harmful	Never smokers: Tobacco is harmful	Current smokers: Once someone starts smoking, difficult to stop	Never smokers: Once someone starts smoking, difficult to stop	Current smokers: Safe to smoke for 1/2 years	Never smokers: Safe to smoke for 1/2 year
		%	%	%	%	%	%
Manicaland	Sex: Male	44.5	54.2	28.0	24.2	20.6	2.8
	Female	29.4	47.3	27.7	17.4	19.7	2.7
	Form: One	27.4	36.4	24.0	17.0	28.4	3.0
	Two	35.7	50.3	21.6	21.2	11.3	4.3
	Three	46.3	61.5	34.9	22.5	17.2	2.1
	Age: <12	29.7	33.9	26.3	4.4	19.1	6.1
	13	49.9	43.4	30.0	19.7	13.6	2.4
	14	33.1	38.8	30.7	21.7	12.9	4.3
	15	32.3	54.0	25.6	21.6	33.5	2.6
	16+	37.6	56.3	29.4	20.5	20.0	2.2
Harare	Sex: Male	45.2	69.0	36.1	28.6	18.3	2.8
	Female	70.1	64.5	40.3	29.0	17.9	2.8
	Form: One	57.6	59.1	50.4	27.4	27.8	3.2
	Two	63.1	60.0	39.1	27.8	16.1	3.4
	Three	54.2	75.7	27.5	29.4	13.4	2.5
	Age: <12	52.6	46.5	66.1	16.9	18.7	6.7
	13	76.8	66.4	50.8	29.9	27.5	3.1
	14	60.5	61.4	45.5	25.1	11.9	2.6
	15	54.0	69.9	28.2	34.2	30.8	2.7
	16+	56.1	69.8	27.2	27.4	15.9	2.9

The levels of knowledge were quite low amongst current smokers, especially for Manicaland. Overall, 36.4% (95% C.I. [29.0, 43.8]) of current smokers in Manicaland definitely thought that smoking was harmful and 50.5% (95% C.I. [41.6, 59.4]) of those that had never smoked cigarettes, definitely thought that smoking was harmful. For Harare, 58.1% (95% C.I. [49.8, 66.4]) of current

smokers definitely thought that smoking was harmful and 66.5% (95% C.I. [56.6, 76.4]) of those that had never smoked cigarettes, definitely thought that smoking was harmful. There was a significant difference amongst current smokers between Harare and Manicaland. The majority of current smokers in Harare actually knew that smoking was harmful to their health. The difference amongst never smokers between Harare and Manicaland was not significant, although as in current smokers, most never smokers from Harare know about the harmful effects of smoking. Only half of those that had never smoked from Manicaland knew that smoking was not good for their health.

About a third of both current and never smokers thought that once someone started smoking it was difficult to stop. Proportionally within regions, more current smokers thought it was difficult to quit than never smokers. The response to this enquiry could have been based on personal experience, for the current smokers.

The differences between current and never smokers within the two regions who thought it was safe to smoke for 1-2 years then quit, were very significant at the 95% Confidence Interval. Nearly a fifth of current smokers thought it was safe, compared to approximately 2% of never smokers. The distribution of these percentages across gender, age and forms were similar for both regions.

Media and Advertising

% Students age 13 – 15 who have seen anti-smoking messages and also advertisements for cigarettes - Manicaland & Harare Regions, Zimbabwe

		Saw Anti-Smoking Media Messages	Saw Anti-Smoking Messages at Sporting & Other Events	Discussed effects of smoking in a school class	Saw Ads For Cigarettes on Billboards	Saw Ads for Cigarettes in Newspapers & Magazines	Saw Brand names when watching sports events or other programs on TV	Saw Ads for Cigarettes at Sports Events
		%	%	%	%	%	%	%
Manicaland	Sex: Male	68.4	64.6	52.5	63.0	63.0	69.0	56.0
	Female	68.0	62.5	52.3	62.6	65.7	74.8	56.4
	Form: One	64.1	56.5	50.8	63.0	67.6	66.2	57.9
	Two	74.1	69.8	53.3	68.0	66.2	79.8	59.1
	Three	67.0	64.4	51.5	57.6	61.7	70.8	54.9
	Age: <12	59.3	62.9	33.9	62.7	68.2	65.2	62.8
	13	67.9	61.3	51.0	69.7	69.9	74.4	66.5
	14	67.6	60.5	53.0	63.6	66.2	71.8	58.0
	15	71.6	66.7	49.2	63.6	65.2	76.5	59.5
16+	66.8	63.3	55.7	59.8	61.3	69.5	51.4	
Harare	Sex: Male	81.4	77.2	33.5	77.2	73.8	86.3	71.8
	Female	80.3	75.1	39.4	73.9	72.5	84.6	71.7
	Form: One	80.2	71.5	39.4	73.0	70.0	82.0	67.7
	Two	81.8	74.1	30.5	80.6	82.3	85.0	78.6
	Three	80.2	81.3	37.8	73.5	72.0	87.4	71.3
	Age: <12	82.9	67.4	33.1	74.0	82.6	84.4	66.5
	13	81.7	71.5	35.1	78.0	71.5	82.7	65.0
	14	80.8	74.7	30.4	76.3	73.6	84.3	76.3
	15	79.9	72.9	35.1	75.8	78.9	85.6	74.8
16+	80.0	83.0	44.5	72.6	68.7	86.1	69.1	

The table on media and advertisements in the previous page shows students exposure to both positive and negative information from different mediums. The role of the media in influencing behavior is well known, and this is a starting point for most programs that try to advocate for anti-smoking. Students were asked about their exposure to anti-smoking messages as well as cigarettes advertisements.

Nearly 8 in every 10 students from Harare had seen anti-smoking media messages, as compared to 7 in every 10 from Manicaland. These differences were quite significant, with no noted differences between males & females, different forms and ages within the same region. Exposure to anti-smoking messages at sporting and other public events were slightly less, with 15 in every 20 students from Harare having seen the messages and 13 in every 20 from Manicaland.

The school environment also offers a good opportunity to deliver anti-smoking messages and a number of questions were asked on lessons and discussions in school on the effects of smoking. More students from Manicaland 52% (95% C.I [48.1, 55.9]) said they discussed the effects of smoking in a school class, as compared to Harare, 36.3% (95% C.I. [31.3, 41.3])

Exposure to cigarette advertisements was also quite high. On students who had seen cigarette billboard advertisements, three quarters had seen these from Harare, with 30% having seen these advertisements a lot and three fifths had seen these from Manicaland, with also 30% having seen these advertisements a lot. Nearly similar proportions had seen advertisements for cigarettes from newspapers and magazines, with higher proportions having seen the ads amongst the current smokers (e.g. 83.1% from Harare).

Students with access to a television (78% for Manicaland and 92% for Harare) were asked how much exposure they had had of cigarette brand names. Nearly eight in every ten students with access to a television had seen cigarette brand names on sporting & other events, with more students from Harare (84.2%) having seen the brand names, compared to Manicaland (74.1%).

Environmental Tobacco Use

% Students age 13 – 15 who are exposed to ETS and their attitudes towards ETS - Manicaland & Harare Regions, Zimbabwe

		Others smoke in their home	Around others who smoke in other places	Definitely think smoke from others is harmful to them	Think smoking should be banned from public places
		%	%	%	%
Manicaland	Sex: Male	34.1	51.4	31.6	34.7
	Female	34.9	50.5	29.2	35.6
	Form: One	38.9	49.8	22.8	22.7
	Two	37.3	56.1	33.0	35.0
	Three	28.9	48.6	34.1	44.9
	Age: <12	46.7	56.7	18.5	42.2
	13	37.8	51.8	27.3	22.8
	14	35.4	52.7	31.4	25.4
	15	33.9	50.8	31.9	38.6
	16+	32.6	50.1	31.7	38.3
Harare	Sex: Male	38.3	62.5	43.2	53.2
	Female	37.0	61.6	43.0	38.8
	Form: One	31.2	57.9	40.2	30.7
	Two	45.9	64.3	43.6	47.5
	Three	37.4	63.2	45.0	55.7
	Age: <12	34.1	47.4	18.9	30.2
	13	28.3	59.1	47.5	42.2
	14	40.7	64.5	42.0	39.3
	15	37.3	62.5	47.0	48.0
	16+	42.0	63.5	39.3	51.5

A number of questions were asked on students' exposure and attitudes to environmental tobacco smoke (ETS). One in three students from both Harare and Manicaland had had someone smoke in their homes, in their presence. This exposure was only for the past seven days, with nearly 13% having been exposed daily. To add to that, a majority of students had been exposed in other places other than their homes, with 52% having been exposed from Manicaland and 62% from Harare. Over 15% from both regions had been exposed on a daily basis. The differences in exposure between males & females, students from different forms and ages, were marginal, though they were significant between current smokers (81.1% for Manicaland and 84.9% for Harare) and never

smokers (42.6% for Manicaland and 56.8% for Harare). The current smokers could have been exposed to their own smoking or they associated or frequented places where they could also smoke.

Attitudes towards smoke from other people differed between current and never smokers. When asked if smoke from other people was harmful to them, 31.9% and 46.4% of never smokers from Manicaland and Harare respectively said it definitely was and 25.8% and 33.5% of current smokers said the same. These percentages were significantly different between regions amongst never smokers, with more students from Harare saying smoke from other people was harmful to them. This same group had more students exposed to smoke from other people as can be seen from the table (56.8% from Harare).

Suprisingly though, not many students were in favor of banning smoking in public places, with less than half saying they were in favor. The percentages were not different between current and never smokers from both regions (32.4% current and 33.3% never from Manicaland and 43.6% current and 43.9% never from Harare)

DISCUSSION

The Global Youth Tobacco Survey is a school-based survey, conducted among Form 1 - Form 3 school children. Even though the survey was undertaken among school going 13 - 15 year olds, it presents a clear picture of the magnitude of the problem of tobacco use among the youths. The survey in Zimbabwe was done in two regions, which differ in main land use, with Harare being predominantly urban and Manicaland rural. The two regions present slightly differing risky behaviors amongst youths from urban and rural settings, as well as access to information on tobacco.

Prevalence, Cessation and Addiction

Tobacco use is quite high amongst the youths, where nearly one in every five youths is currently using tobacco products, with the onset of cigarette smoking being as young as age 10. The question that was asked for the onset of cigarette smoking was 'How old were you when you first tried a cigarette', and of those that had smoked cigarettes in the past 30 days (current smokers), approximately 33% had initiated before the age of 10, with some even as young as age 7, approximately 13%. There could have been some breaks in the smoking but the message that is clear is, some of the youths who experimented with smoking at a very young age, later developed this practice and could not stop. This is also supported by the difficulties some of the current smokers expressed in quitting smoking, with over half having tried to quit in the previous year with no success. The students however, still believe quitting was within their control, with over three in every four saying they were able to stop smoking if they wanted to, more so students from Harare. Young people frequently experiment with new and sometimes risky behaviors. However they often don't take into serious consideration the long-term consequences of such behaviors. For youths, the risks of tobacco use are perceived to be remote and are outweighed by what they see as the immediate benefits. They tend to underestimate the addictiveness of nicotine and the difficulties associated with quitting, believing it is easier for young people to quit than adults.

One other salient feature that emerged from this survey is the high use of other tobacco products especially by youths from Manicaland (rural & commercial farming areas). Manicaland is one region where most tobacco is grown and this evidence shows the easy access to these products the youths have. Also, in other studies, it had been shown that male youths smoke four times as much as females, but this shows a different trend, with more and more females smoking just as much as males.

Harmful Effects of Smoking

Studies have shown the strong relationship between smoking prevalence and lung cancer patterns. Because smoking is the major cause of lung cancer and lung cancer commonly takes 20 or more

years to develop, smoking prevalence is an important predictor of future lung cancer patterns. Likewise, today's lung cancer patterns are a good indicator of the smoking prevalence of previous decades. Furthermore the younger a person is when they take up smoking, the greater their chances of contracting cancer later in life. Given the above-mentioned trends in smoking prevalence, it can safely be assumed that a majority of the youths that are current smokers will develop lung cancer before they reach the age of 35. Besides lung cancer, there are other diseases that studies have shown to be caused by smoking, which include heart diseases, strokes and a range of respiratory diseases.

Public Awareness and Knowledge about the Dangers of Tobacco

In Zimbabwe, a number of programs have been initiated to raise awareness on the dangers of tobacco smoking, and some of these have been directly targeted at youths. However, this information has been diffused with other contradicting messages, which portray 'positive' images of smoking and using tobacco products. These images are portrayed through advertisements in the media, on billboards, at public events and also through other means like movies, music etc. Youths are made to believe that smoking is 'cool', fun, glamorous, modern and Western, and watching their role models smoke further encourages them to smoke too. Efforts being made at sending anti-smoking messages to the youths are being diluted by these 'positive' images of smoking. Students in Harare are more exposed to both types of messages because generally more people have access to televisions, newspapers & magazines. Most billboards are erected and more sporting events, especially soccer matches, the most popular sporting events in Zimbabwe, are held in urban areas.

Interactive Communication Methods to Increase Knowledge

The use of media for providing information reaches a bigger audience but is non-interactive. The survey explored other interactive communication methods, discussions in a classroom environment. Students were asked if they were told or had discussed in class, the effects of smoking as well as why young people of their ages smoked. About half the students from Manicaland and only a third from Harare, had discussed the effects of smoking in a class, and even less had discussed the reasons why young people smoked, 28% from Harare and 38% from Manicaland. These are very small percentages, even for Manicaland, considering the magnitude of the problem (the high prevalence of smoking & the young ages these youths start smoking), the harmful effects and the opportunity the school environment presents for campaigning against smoking. The school curriculum in Zimbabwe does not necessarily include education on tobacco and drug abuse, but these topics are usually covered in the HIV/AIDS Education. Due to the high prevalence of HIV/AIDS in Zimbabwe, a number of school based intervention programs have been initiated to curb the spread of the disease. Due to the proven association between high-risk behaviors like tobacco & drug abuse and HIV transmission, most of the school-based programs are now touching on the dangers of tobacco but

mainly in relation to HIV transmission. As shown by the percentages above, clear messages on the health hazards of smoking are not being adequately given within the school environment. Also, parents as the main custodians or duty bearers of children and young people are not playing their role in educating their children on the dangers of smoking. Only half the students who smoke had discussed the harmful effects of smoking with a family member. Some parents are not good role models for their children since more than half of the current smokers reported that their parents smoked too. This has a great influence on children's behaviors, especially adolescents.

Regulations in Zimbabwe to Control Smoking in Young People

Chapter 5:06 of the Statute Law of Zimbabwe prohibits the sale of alcoholic beverages or tobacco products to persons below the age of 18. All students interviewed in this survey were below the age of 18 and of the current smokers, more than half of them obtained their cigarettes from a store and of these more than half were not refused because of their age, more so for Harare (nearly three-quarters). This shows that there is a gap in the above law and the practice. Most of the shopkeepers are well aware of the age restriction but due to the need for increased sales, they do not adhere to the requirements. Because of lack of enforcement of this law, the practice is further worsened because the shopkeepers know that nobody will prosecute them. Parents, guardians or adults on the other hand are not helping in this case. Some parents are known to send their under aged children to buy cigarettes on their behalf. With some of these adults it's a clear lack of knowledge regarding the regulations as well as the consequences of such actions. The other complication to this scenario is the influx of street vendors, especially in Harare. Most of these street vendors who sell their wares at every street corner of Harare are not licensed and they are more worried of being caught vending without a license than be concerned with their customers' ages.

Environmental Tobacco Smoke

Some effort is being made to ban smoking in public places but at an individual level. Some service providers have banned smoking or have a smoking and a no-smoking zone in their premises. These efforts to protect non-smokers are not being supported at the policy level, in order to effectively protect non-smokers from passive smoking. Most of the places frequented by the youths interviewed in the survey do not have anti-smoking rules within their premises, as shown by the large percentages of youths who said they were around others who smoked in the previous week, some being exposed to ETS on a daily basis. Besides the obvious discomfort of being around someone who smokes, the harmful effects of passive smoking are not that obvious to the youths. Very few are aware of the dangers of smoke from other people's cigarettes with yet fewer in favor of banning smoking in public places. This is unmistakably a lack of knowledge on the dangers of environmental tobacco smoke to one's health. During the past two or so decades, research has been undertaken worldwide to reveal the evidence on the health effects of passive smoking. These

reviews have concluded that passive smoking increases the chances of contracting or aggravating a range of illnesses including:

- cardiovascular disease
- lung cancer
- asthma (particularly in children)
- acute irritation of the respiratory tract
- bronchitis, pneumonia and other chest illnesses in children

RECOMMENDATIONS

In Zimbabwe, the adoption of recommendations especially at policy level, are hampered by the economic use of tobacco. Tobacco is the main foreign currency earner in Zimbabwe and its use locally is increasing. One huge problem that cannot be overshadowed by the economic use of tobacco is its increased use by young people and the long-term effects to their health.

From this survey, the increased use of cigarettes and other tobacco products by young people has been shown and many recommendations especially specific intervention programmes can be drawn. From the discussion above, three broad recommendations are given:

1. Awareness campaigns on the dangers of cigarette smoking & tobacco products need to be intensified. Most school based anti-smoking campaigns are done on the World-No-Tobacco Day but there is need for regular education on the dangers of tobacco. Also, anti-smoking campaigns should not just target people with access to television and radio, but should also be targeted for those without access. In the rural areas, use of other tobacco products is rampant as shown and information on the dangers of these should be provided, through means accessible to the rural people, who are the majority, constituting over 60% of the population in the country. However, due to insufficient government funding for information dissemination various information, education and research initiatives can also be developed and implemented by NGOs operating within communities.
2. Educational programmes and health promotion campaigns can serve a useful role in tobacco control, particularly in areas where the harms of tobacco use are not widely known. However, unless they are backed up by strong public policies, which help young people refrain from using tobacco, educational programmes have only modest results. Such education programmes and health promotion campaigns should be placed in the overall context of strong and coherent tobacco control policies.
3. Due to the fact that children are likely to start smoking if they grow up in an environment where tobacco advertising is prolific, where smoking rates are high among adults (including those that serve as role models for young people), where tobacco products are cheap and easily accessible, and where smoking is unrestricted in public places, the tobacco control policies need to take this into consideration. Besides drafting such policies, their enforcement and public awareness need to be considered. The starting point could be the law already in place on the sale of tobacco products to children aged below 18, which does not seem to be adequately enforced or known to the public.

APPENDIX A: WEIGHTING, VARIANCE ESTIMATION, & STATISTICAL TESTING

Weighting & Variance Estimation

School, classroom and students data were weighted to produce total population estimates. The weighting factor reflects the probability of selection, non-response, and post-stratification (gender & form). Variances were estimated using the general linear variance estimators. This method of computing variances takes into account the complex nature of the design and the classroom effect. It also accounts for sampling with the probability proportional to measure size. SUDAAN was used to compute standard errors for the estimates

A percent and its estimated standard error may be used to construct confidence intervals (C.I.) about the percent. The C.I. is expressed as a range (upper and lower) around the percent. The C.I. range contains the average value of the percent, which would result if all possible samples were produced. The 95% C.I. suggests that if 100 samples were drawn and C.I.s were calculated for each, then the average value of the percent would be contained in 95 of the 100 C.I.s

Statistical Testing

The test of statistical significance is done by comparing the 95% C.I. for two percentages. If the C.I.s do not overlap then the percentages are significantly different.

E.g. In the table on prevalence, 30.1% males and 21.5% females from Harare had ever tried smoking.

- The 95% C.I. for each percent is calculated by multiplying the standard error (SE) by 1.96, giving 6.9 & 4.0 for males and females respectively.
- Therefore the lower and upper bounds for the two percentages are
Males 30.1% = [23.2,37.0]
&
Females 21.5% = [17.5,25.5]
- Statistical difference is determined by comparing the upper bound, for the smaller % and the lower bound, for the larger %
 - if the two ranges do not overlap, then the two %s are statistically (significantly) different at the 95% C.I.
 - if the two ranges overlap, then there is no statistical (significant) difference between the two %s, at the 95% C.I.
- In this example, the percentages 30.1 [23.2, 37.0] and 21.5 [17.5, 25.5] overlap, therefore there is no significant difference in students who have ever smoked, between male and female students.

APPENDIX B: DEFINITIONS AND ACRONYMS

Definitions

Current smoker	Those who smoked cigarettes on 1 or more days in the past 30 days
Never smoker	A person who had never tried or experimented with cigarette smoking, even one or two puffs
Passive smoking	The inhalation of environmental tobacco smoke
Population	Set of people or entities to which findings are to be generalized
Region	The same as a province in Zimbabwe. There are 10 main administrative provinces in Zimbabwe
Sample	A collection of units, selected to draw conclusions about a population
Significance	The percent chance that a relationship found in the data is just due to an unlucky sample, and if we took another sample we might find nothing.
Youth	Aged between 10 - 24

Acronyms

Ads	Advertisements
AIDS	Acquired Immune Deficiency Syndrome
CAGs	Country Activating Groups
C.I.	Confidence Interval
CDC	Centre for Disease Control
ETS	Environmental Tobacco Smoke
GYTS	Global Youth Tobacco Survey
HIV	Human Immunodeficiency Virus
M&E	Monitoring & Evaluation
NGO	Non Governmental Organisation
TFI	Tobacco Free Initiative
UN	United Nations
UNF	United Nations Foundation
UNFIP	United Nations Foundations for International Partnerships
UNICEF	United Nations Children's Fund
WHO	World Health Organization

APPENDIX C: REFERENCES

1. Adams, G.R, Gullotta J.P.; *Adolescent life experiences*, Pacific Grove: Brooks/Cole Publishing Company
2. An International Perspective; *Smokeless Tobacco or Health*: (September 1992)
3. Campbell, J.S.; *Tobacco and the Environment*, (1994), CORESTA Congress Paper, Harare
4. Chollat-Traquet, C.; *Evaluating Tobacco Control Activities*, World Health Organization; (1996), Geneva
5. Gurkan, F.; Kiral, A.; et al; *The Effect of Passive Smoking on the Development of Respiratory Syncytial Virus Bronchiolitis*, European Journal of Epidemiology 16 (5): 465-468, May 2000.
6. Kanvil, N.; Umeh, K. F.; *Lung Cancer and Cigarette Use: Cognitive Factors, Protection Motivation and Past Behaviour*, British Journal of Health Psychology 3 (5): 235-248, September 2000.
7. Munodawafa D., Marty P.J.; Gwede C. *Drug use and anticipated parental reaction among rural school pupils in Zimbabwe*, Journal of School Health, 1992
8. Nyakauru R., Ferguson A.; *National youth reproductive health survey*, ZNFPC & GTZ.
9. Phiri, Erulkar A.S.; *Experiences of youth in rural and urban Zimbabwe*, ZNFPC, July 1999, Harare, Zimbabwe
10. Rooney, M & Ellis, M.; *Zimbabwe Tobacco -An Important Economic Impact Study*, (1994), unpublished paper, Harare.
11. The Commonwealth African Investment Almanac; *Zimbabwe: Investment and Business Environment* ; 1999
12. The Report of the United States Environmental Protection Agency; *Respiratory Health Effects of Passive Smoking Lung Cancer and Other Disorders*; (August 1993)
13. UNICEF-Zimbabwe; Findings from a formative research study on Health and Development needs among out-of-school youth in Zimbabwe;, 1999
14. WHO Information Fact Sheets; *The Tobacco Epidemic: A global public health emergency*;; <http://www.who.int/inf-fs/en/fact118.html>
15. WHO Information Fact Sheets; *Tobacco Use by Children: "a paediatric disease"*; <http://www.who.int/inf-fs/en/fact197.html>
16. WHO Information Fact Sheets; *Tobacco – Health Facts*; <http://www.who.int/inf-fs/en/fact221.html>
17. WHO Information Fact Sheets; *Tobacco Dependence*; <http://www.who.int/inf-fs/en/fact222.html>