Tobacco use and challenges among 13-15 year old students in Uganda: A Global Youth Tobacco Survey Report (2007).

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Abstract

Objectives

This study describes the prevalence as well as knowledge and attitudes of Senior One to Senior Three students in Uganda of tobacco use. It also analyses their exposure to environmental tobacco smoke (ETS) and cessation efforts as well as the extent to which they receive anti-tobacco instruction in schools and information from the media and exposure to pro-tobacco activities such as media/advertisement. In addition, it describes the students' access to and availability of tobacco products.

Method

This is a cross-sectional survey of students in Senior One to Three conducted in 2007 in 51 secondary schools of Kampala City and the 'rest of the country' (ROC) represented by 5 districts in Uganda. A two-stage cluster sample design was used to produce representative data for the study. At the first stage, schools were selected with probability proportional to enrolment size. At the second stage, classes were randomly selected and all students in selected classes were eligible to participate. A pre-tested, modified Global Youth Tobacco Survey (GYTS) questionnaire was used. The school response rate was 96.1%; student response rate was 84.5% and the overall response rate was 81.2%.

Results

Overall 15.6% of the students have ever smoked cigarettes. The rate among boys that have used tobacco was significantly higher (19.2%) than among girls (11.2%).

The overall percentage of students currently using tobacco product was 5.5%. The majority of students (70.5%) were taught about the dangers of smoking and its effect as part of lessons in the class. Perhaps, as a consequence, a majority (70.3%) of the current smokers expressed their desire to quit and also made an attempt (76.6%) to stop tobacco use.

One fifth of the students (20.0%) live in homes where others smoke in their presence and close to half (45.6%) are around others who smoke in places outside their homes. This is so even as a majority (69.4%) of the students are aware of the harmful effects of smoke from others to them. About half (48.3%) of the students think smoking should be banned from public places.

Findings also suggested that a majority of school students have unrestricted access to tobacco products. Two in ten students of the current tobacco users buy tobacco products in a store. Over a half (62.0%) of the current tobacco users bought tobacco in a store and were not refused purchase because of their age.

Findings also indicate high levels of exposure to tobacco messages for students. Over half of students both in the national and the Kampala categories had seen pro-tobacco billboards (54.7% and 57.5%, respectively) in the past 30 days and about a half had seen pro-cigarette ads in newspapers and magazines (48.3%; 49.0% respectively). One in ten students for both sexes in Kampala as well as the national category reported owning a cigarette brand logo and had been offered free cigarettes by representatives of a tobacco company.

The existence of wrong perception of school students about their smoking habits was also evident from the findings. Overall, nearly a third (26.8%) think boys who smoke have more friends while 14.9% think girls who smoke had more friends.

Conclusion

This survey shows that the prevalence of tobacco use among lower high schools students in Uganda is still high and a major problem. The level of tobacco use among adolescents as well as attitude and behaviours

did not change that much from the findings of the Uganda 2002 GYTS. The findings make a strong case for the need to develop comprehensive tobacco control programmes in schools. Immediate action is required to help students quit smoking and prevent non-smokers to start smoking in the future and to reduce ETS.

1. Introduction

Yet tobacco use is one of the leading preventable causes of disease and death in the world, estimated to kill 4.9 million people annually compared to 3 million annual deaths due to HIV AIDS.[1] The World Health Organization (WHO) estimates 1.1 billion smokers in the world today – a figure expected to rise to 1.64 billion by 2025. By 2020, tobacco's death toll will be 10 million, 70% of these in the developing countries as the tobacco industry is steadily relocating to the poor south due to tighter regulation in the developed countries.

Africa's share of these fatalities is expected to rise because African countries are projected to experience some of the highest increase in the rate of tobacco use amongst developing countries. The tobacco use situation is projected to deteriorate because the tobacco industry is relocating to the developing countries, fleeing harsh regulations in the developed countries[2].

According to the World Health Organization tobacco use prevalence was 29% in males and 7% in females in 2000[3]. In addition, there were 200,000 tobacco-related deaths[4]. These figures are in tandem with the model of the smoking epidemic[5] based on evidence from countries with longest history of tobacco use, which describe evolution of cigarette smoking and the subsequent mortality. Africa is in stage 1, where health consequences are not yet apparent on a large scale and fewer women than men have taken up the habit.

Many of tobacco's future victims are today's children because tobacco use is initiated in adolescence and continues through adulthood as a result of addiction to the habit. This is a major challenge in African countries where the majority of the population is under 18 years.

The increasing tobacco related disease burden thus represents an enormous challenge and drain on the continents' impoverished public health services already grappling with HIV/AIDS and malaria.

2. Tobacco use in Uganda

The British-American Tobacco (BAT) Company introduced tobacco in Uganda in the 1920s. Tobacco is currently one of the country's leading cash crops and source of tax revenue. Further significance of the economic muscle of tobacco is underlined by the fact that over 600,000 people derive their livelihood from the industry (Karugaba, 2001).

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[1] Implementation of the Framework Convention on Tobacco Control in the African Region: Current Status and the Way Forward: Report of the Regional Director, Fifty-fifth session, Maputo, Mozambique August 2005, Provisional Agenda Item 8.7.

[2] Guindon E, Boxcar D., Past, current and future trends in tobacco use. HNP Discussion Paper, Economics of Tobacco Control Paper, No.6, Geneva, WHO/World Bank, 2003.

[3] Guindon, E, Boxcar D., Past, current and future trends in tobacco use. HNP Discussion Paper, Economics of Tobacco Control Paper, No.6, Geneva, WHO/World Bank, 2003.

[4] WHO, The world health report 2002: Reducing risks, promoting health life, Geneva, World Health Organisation, 2002.

[5] Lopez AD, Collishaw NE, Piha T. A descriptive model of cigarette epidemic in developed countries. Tobacco Control 1995; 3:242-7.

Comprehensive studies of prevalence of tobacco use in Uganda are limited. However, the Uganda Demographic Health Survey (2001) indicated that cigarette smoking prevalence among adults is at 25% for males and 3% for females. Kanyesige et al (1997) noted that among the youth 19% of the secondary students and about 35% of the students in tertiary institutions smoke.

A study carried out at Mulago hospital found that 75% of the patients of oral cancer had a history of smoking with the number of years of cigarette smoking ranging from 2-38 years (Bataringaya 2001). In addition, 45% of the patients had a history of smoking within the 10-19 year duration. Data also suggests that smokers in Uganda might be starting at an early age and that under-age smoking is a problem. Lukwiya (2000), for instance reported that the mean initiation age of smoking was 13.5 years in Jinja district. Nambi et al (2001) in their study carried out in Arua, Kampala, Lira, Mbale, Mbarara and Masaka districts found that the initiation age of underage smokers was below 9 years.

One of the more comprehensive studies of tobacco use in Uganda was the Uganda 2002 GYTS Survey, which this study replicated. The Uganda GYTS 2002 [6]analysed tobacco use, attitudes and related behaviours of school-going 13 to 15 year old adolescents. It found that about 5% of the students were current smokers. Boys were more likely to use cigarettes and other tobacco products than girls.

The study further found high levels of exposure to second-hand tobacco both at home in public places among adolescents and it reported that about 7 in 10 students were in favour of a ban on smoking in the public. Most students who were current smokers expressed a desire to stop smoking (80%) with over two-thirds having attempted to stop smoking and failed. Further more, a large number of students had been exposed to tobacco advertising although a majority had also been taught about the dangers of smoking.

3. The Global Youth Tobacco Survey (GYTS)

The GYTS is a school-based tobacco specific global survey, which focuses on adolescents of ages 13-15 and corresponding grades (in Uganda this corresponds to high school grades – Senior One to Senior Three). It establishes the prevalence of tobacco use status of school going students in a country, assesses knowledge, attitude and behaviour related to tobacco use and exposure to environmental tobacco smoke (ETS) and related factors. It also assesses students' exposure to pro-tobacco and anti tobacco activities in a country.

Objectives of GYTS:

- To find out the magnitude and extent of tobacco use among school students with special focus to 13-15 years age group and to monitor the change over years.
- To assess and understand the level of exposure to pro-tobacco and anti-tobacco activities and corresponding knowledge and attitudes of students regarding tobacco use so as to plan and implement effective anti-tobacco programmes in a country.

This report, like GYTS in other countries, will attempt to unveil the following issues related to tobacco use in Uganda:

- Determine the level of tobacco use by school students

[6] Mpabulungi, L. Uganda Global Youth Tobacco Report. Parliament Research Service, Kampala, Uganda, 2002.

- Estimate age of initiation of cigarette use
- Assess students' knowledge and attitude regarding tobacco use
- Find out the level of exposure of school students to pro-tobacco activities such as media / advertisement, access and availability
- Assess students' exposure to environmental tobacco smoke and cessation efforts
- Assess anti-tobacco instructional activities in school

4. Methodology:

The 2007 Uganda GYTS was a school based cross-sectional survey, which employed a two-stage cluster sampling design to produce a two-stage cluster representative sample from Kampala and the 'Rest of the country' (ROC) which comprised five districts of Arua, Gulu, Jinja, Masindi, and Mpigi. Kampala as well as the ROC districts were purposely selected for the survey. Kampala is the Uganda's major urban centre while the other districts represented the 5 official regions of the country i.e. Northern, North-western, Northern, Eastern, Western and Central respectively. In addition, but for one, the survey districts were the same districts in which the 2002 GYTS survey was implemented.

4.1. Study design and sampling technique:

The GYTS survey sample used a two-stage cluster design. In the first stage of sampling, public and private secondary schools with Senior One to Senior Three classes were selected randomly with a probability proportional to enrolment size. National school enrolment data was obtained from the Ministry of Education and Sports. A total of 56 secondly schools were sampled, with 25 schools from Kampala and 26 schools from the Rest of the Country i.e. 5 schools for each of the districts with the exception of Jinja which had 6 schools selected due to a higher student population. Schools with big enrolment size had a greater chance of being selected. See *Table 1* for the number of schools and students drawn for the sample.

Table 1: Study sample sizes among schools and students

District/Region	No. of schools in the sample	No. of students selected (Senior 1-3)
Capital city		
Kampala	25	2,074
Rest of the country (i.e. Arua, Gulu, Jinja, Masindi and Mpigi)		
ROC	26	2,194
Total	***51***	***4,268***

The second stage consisted of systematic equal probability sampling. Classes (Senior One to Three) were randomly selected from within the selected schools and all the students from within the selected class were eligible to participate in the survey.

4.2. Development of questionnaire

A self-administered questionnaire was used for data collection. It consisted of 55 questions with core questions adopted from a questionnaire developed under the guidance of WHO and the Centres for Disease Control, which comprised core component that provided similar data for the comparison between countries and regions and a set of optional component that provided data to analyse the special issues relevant to the Ugandan situation.

A weighting factor was applied to each questionnaire to reflect the likelihood of sampling each student and reduce bias by compensating for different patterns of non-response.
The weight used for estimation is given by:
W = W1 * W2 * f1 * f2 * f3 *f4
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 adjustment factor calculated by school
f3 = a student-level non-response adjustment factor calculated by class
f4 = a post stratification adjustment factor calculated by gender and grade

5. Data Collection and analysis:

Printed questionnaires along with School ID forms and Class level ID forms were made available to the survey administrators. A letter was sent to all selected schools for their consent to undertake the survey. The purpose of the survey was discussed with the school authorities and the classes were selected as per the school level form. After selection of class, the anonymous self-administered questionnaire was administered with due explanation of the nature and the intent of the survey. The teachers and school personnel were not present during administration of the questionnaire to encourage the students to provide their own answers without bias. The survey was carried out from March to April 2007.
The answer sheets was sent to CDC/OSH where data was entered and analysed using Epi Info, a software package, which executed the complex sampling design and weighing factors in the data set, to calculate standard errors and prevalence estimates. The statistical differences included in this report were determined by comparing the range of the 95% confidence interval (95%CI) for the estimates. If the ranges for the 95% CI did not overlap then the difference were statistically significant. The weighted results were used to make important inferences concerning tobacco use risk behaviours of surveyed students. The following response rate was obtained in the study:
Schools: 96.1%
Students: 84.5%
Overall response rate: 82.2%

6. Results

Prevalence

To analyse prevalence of tobacco use, students were asked questions pertaining to whether they had ever-smoked, status of current tobacco and cigarette use, and the likelihood of starting to smoke.

Table 2: Percentage of students who use tobacco, Uganda GYTS, 2007

Category	Ever smoked cigarettes, even one or two puffs	Current tobacco user	Current cigarette smoker	Currently use other tobacco products	Percent never smokers likely to initiate smoking within a year
National	15.6 (13.1 - 18.4)	16.6 (14.4 - 19.2)	5.5 (4.2 - 7.1)	13.9 (11.9 - 16.2)	6.7 (5.4 - 8.3)
Male	19.2 (15.7 - 23.3)	17.3 (14.7 - 20.2)	6.6 (5.2 - 8.5)	13.8 (11.5 - 16.4)	8.1 (6.3 - 10.4)
Female	11.2 (9.3 - 13.6)	15.3 (12.8 - 18.2)	4.0 (2.7 - 5.8)	13.5 (11.0 - 16.5)	5.1 (3.5 - 7.5)
Kampala	15.0 (11.8 - 18.8)	15.6 (12.3 - 19.6)	5.2 (3.5 - 7.7)	13.3 (10.4 - 16.9)	5.9 (4.5 - 7.7)
Male	18.2 (14.2 - 23.0)	16.3 (12.4 - 21.2)	5.7 (3.5 - 9.2)	14.3 (10.2 - 19.7)	6.9 (4.5 - 10.3)
Female	11.4 (8.4 - 15.4)	14.1 (10.5 - 18.8)	4.2 (2.7 - 6.4)	12.0 (8.8 - 16.1)	5.0 (3.8 - 6.6)

Overall, 15.6 percent of the students at the national level had ever smoked cigarettes (male: 19:2 and females: 11.2%). Current cigarette smokers were 16.6%, with males (17.3%) smoking more than females (15.3%). Findings also suggest high usage of tobacco in other forms rather than cigarettes. Overall 13.9% at the national level reported current use of other tobacco products with the difference between male and female usage not statistically significant. Regarding another key prevalence factor, predisposition to smoke, overall, 6.7% of never smokers were likely to initiate smoking next year. There was no statistically significant difference between prevalence rates for Kampala and the national level.

Knowledge and attitudes

Knowledge and attitudes are often a guide to behaviour. Thus, students were asked whether they thought of boys and girls who smoke had more friends or looked more attractive.

Table 3: Knowledge and attitudes, Uganda GYTS, 2007

Category	Think boys who smoke have more friends	Think girls who smoke have more friends	Think smoking makes boys look more attractive	Think smoking makes a girl looks more attractive
National	26.8 (24.1- 29.7)	14.9 (13.5- 16.5)	10.7 (9.4 - 12.3)	7.3 (6.0 - 8.7)
Male	23.9 (20.2 - 28.1)	13.0 (10.7- 15.8)	10.0 (8.7 -11.5)	6.4 (5.3- 7.8)
Female	29.4 (26.3 -32.7)	16.8 (14.7 - 19.2)	11.3 (9.2 - 13.7)	7.8 (5.9 -10.3)
Kampala	27.3 (24.3 -30.6)	16.7 (14.1-19.5)	10.7 (8.5- 13.3)	7.0(5.0- 9.6)
Male	23.4 (19.9 - 27.3)	14.8 (11.6 - 18.5)	10.6 (8.0-13.9)	6.4 (4.2 -9.8)
Female	30.2 (26.8- 33.9)	18.2 (15.4- 21.3)	10.4 (7.5-14.2)	7.2 (4.7 - 10.9)

Over a quarter, (26.8%) of the students nationally thought that boys who smoke have more friends than those who did not smoke. Incidentally, more girls (29.4%) than boys (23.9%) thought so. Correspondingly, 14.9% of the students think that girls who smoke are more attractive than those who do not. Again more girls (16.9%) thought so than boys (13.0%). The difference in the findings between the national level and Kampala was not statistically significant.

Access and availability

Students were asked questions regarding their access to cigarettes and the availability of cigarettes to them e.g. where do you usually smoke from and how do you usually get the cigarettes you smoke? Places where students usually smoked varied from their homes, friend's house, public spaces, and social events to work places, as shown below.

Table 4: Access and availability to tobacco, Uganda GYTS, 2007

Category	Current Smoker			
	Percent of current smokers who usually smoke at home	Percent of current smokers who buy cigarettes in a store	Percent of current smokers who always have or feel like having a cigarette first thing in the morning	Percent of current smokers who bought cigarettes in a store in the past 30 days who were NOT refused cigarettes because of their age
National	32.3 (23.3 - 43.0)	18.8 (12.8 - 26.9)	24.0 (12.1 - 41.8)	62.0 (37.5 - 81.7)*
Male	25.5 (14.8 - 40.4)	18.3 (11.3 - 28.2)	14.5 (6.1 - 30.5)	63.4 (32.0 - 86.4)*
Female	46.1 (30.7 - 62.4)	20.8 (11.3 - 34.9)	29.5 (10.2 - 60.7)*	64.1 (37.5 - 84.2)*
Kampala	27.3 (16.6 - 41.5)	20.8 (11.5 - 34.5)	14.7 (6.3 - 30.5)	43.2 (14.8 - 76.8)*
Male	15.7 (5.2 - 38.7)*	18.3 (7.6 - 37.7)*	4.9 (0.5 - 33.9)*	50.4 (10.4 - 89.9)*
Female	39.7 (22.8 - 59.5)*	23.8 (9.8 - 47.2)*	13.8 (3.8 - 39.5)*	43.3 (12.9 - 79.7)*

* < 35 cases in the denominator

About a third of students (32.7%) who are current smokers usually smoke at home with girls more likely than boys to do so (46.1% and 25.5% respectively). The same difference between boys and girls is reflected in the Kampala findings as indicated in Table 4. Almost a fifth of the current tobacco users bought tobacco in a store and more than a half of the students were not refused purchase because of their age.

Environmental tobacco smoke

The overall environmental tobacco smoke (ETS) situation among high schools students in Uganda is viewed in terms of the extent to which students are exposed to second-hand smoking in their surrounding and their attitudes towards ETS.

Table 5: Environmental tobacco smoke exposure

Category	Percent who live in homes where others smoke	Percent who are around others who smoke in places outside their home	Percent who have one or more parents who smoke	Percent who think smoking should be banned from public places
National	20.0 (16.5 - 24.1)	45.6 (42.3 - 49.0)	11.5 (8.9 - 14.6)	48.3 (43.3 - 53.4)
Male	20.7 (16.8 - 25.3)	46.1 (41.1 - 51.2)	12.4 (9.4 - 16.1)	49.6 (41.8 - 57.4)
Female	18.8 (15.3 - 22.8)	45.2 (42.5 - 47.9)	10.3 (8.1 - 13.1)	47.5 (43.2 - 51.8)
Kampala	15.0 (12.5 - 18.0)	43.3 (41.0 - 45.6)	8.7 (7.0 - 10.6)	56.0 (50.3 - 61.7)
Male	15.4 (12.1 - 19.4)	46.0 (43.0 - 49.0)	7.4 (5.3 - 10.2)	59.6 (52.6 - 66.2)
Female	13.6 (11.3 - 16.4)	41.2 (38.2 - 44.3)	9.4 (7.6 - 11.6)	53.7 (47.1 - 60.1)

At the national level, exposure to second-hand smoking among students at home is one fifth and in Kampala it is 15.0%. Students at both the national and Kampala levels reported being significantly exposed to tobacco smoke outside their homes. Around half of the students in general think smoking in public places should be banned. There was no significant difference in the levels of exposure to ETS between boys and girls.

Cessation

Table 6: Cessation, Uganda GYTS 2007

Category	Percent of current cigarette smokers who want to stop smoking	Percent of current cigarette smokers who tried to stop smoking during the past year
TOTAL	70.3 (57.1 - 80.8)	76.6 (63.0 - 86.3)
Male	81.1 (59.2 - 92.7)	79.0 (61.2 - 90.0)
Female	60.6 (43.7 - 75.3)*	80.6 (44.9 - 95.5)*
Kampala	61.8 (48.7 - 73.3)*	72.1 (54.5 - 84.8)*
Male	63.2 (35.0 - 84.6)*	67.8 (37.0 - 88.3)*
Female	56.6 (37.5 - 73.9)*	86.4 (62.8 - 96.0)*

* < 35 cases in the denominator

Overall, the majority of students currently smoking expressed a desire to stop smoking (7 in 10 at the national levels; and 6 in 10 in Kampala).

Findings further indicate 7 in 10 both for national and Kampala had tried to stop smoking in the past year preceding the survey. Slightly more girls than boys had tried to quit.

Media and advertising

Table 7: Media and advertising

Category	Percent who saw anti-smoking media messages in the past 30 days	Percent who saw pro-cigarette ads on billboards in the past 30 days	Percent who have seen pro-cigarette ads in newspapers or magazines in the past 30 days	Percent who have an object with a cigarette brand logo	Percent were offered free cigarettes by a tobacco company representative
TOTAL	71.2 (66.2 - 75.6)	54.7 (51.1 - 58.3)	48.3 (45.8 - 50.9)	12.3 (10.5 - 14.2)	10.3 (8.3 - 12.8)
Male	72.0 (66.4 - 77.0)	56.3 (52.4 - 60.1)	47.5 (44.2 - 50.9)	12.4 (9.6 - 15.9)	11.2 (8.4 - 14.9)
Female	70.3 (65.2 - 75.0)	52.4 (48.3 - 56.5)	49.0 (46.0 - 52.0)	11.6 (9.5 - 14.1)	9.4 (7.5 - 11.7)
Kampala	73.2 (68.2 - 77.6)	57.5 (53.6 - 61.3)	51.3 (47.9 - 54.6)	11.1 (8.8 - 13.8)	9.1 (6.8 - 12.2)
Male	73.7 (67.8 - 78.8)	61.9 (54.2 - 69.1)	54.6 (48.4 - 60.7)	11.3 (7.8 - 15.9)	10.3 (6.5 - 15.9)
Female	73.0 (68.1 - 77.3)	53.6 (51.0 - 56.2)	49.4 (46.5 - 52.2)	11.1 (8.8 - 13.9)	8.0 (5.9 - 10.6)

Over half of students both in Kampala and from the national sample had seen pro-tobacco billboards (54.7% and 57.5%, respectively). Again about a half of the students across sexes had seen pro-cigarette ads in newspapers and magazines in the past 30 days. One in ten students for both sexes in Kampala as well as the national category reported owning a cigarette brand logo and had been offered free cigarettes by representatives of a tobacco company.

School curriculum and tobacco use

Table 8: School curriculum and tobacco, GYTS Uganda 2007

Category	Percent who had been taught in class, during the past year, about the dangers of smoking	Percent who had discussed in class, during the past year, reasons why people their age smoke	Percent who had taught in class, during the past year, the effects of smoking
National	70.5 (67.2 - 73.7)	62.4 (59.2 - 65.4)	69.4 (65.9 - 72.7)
Male	70.3 (65.4 - 74.8)	61.1 (55.6 - 66.2)	69.0 (63.0 - 74.5)
Female	71.1 (66.3 - 75.4)	64.2 (60.7 - 67.6)	69.8 (66.1 - 73.2)
Kampala	64.3 (59.5 - 68.9)	55.8 (51.1 - 60.4)	61.8 (56.4 - 67.0)
Male	61.2 (56.2 - 65.9)	52.4 (48.1 - 56.7)	59.4 (52.8 - 65.7)
Female	66.7 (58.9 - 73.7)	58.9 (51.9 - 65.5)	63.3 (56.3 - 69.9)

To examine the awareness levels of students about tobacco use and effects, questions about health education at school were asked. About 7 in 10 students had been taught in the year preceding the survey about the dangers and effects of smoking (see table 8). The difference between boys and girls was not statistically significant. About 6 in 10 students had discussed reasons why people their age smoke.

7. Discussion

The general situation of tobacco as regards young people all over the world, including in less developed countries such as Uganda, shows that they are at a high health risk not only as users but non-users exposed to environmental tobacco smoke.

The prevalence including attitudinal and behavioural aspects of tobacco smoking habit has been studied in a limited way in some countries including Uganda in the past, but no uniform and standardized criteria have been used to make results strictly comparable. The GYTS is unique in the sense that it is done uniformly and using rigorous methodology in a global context. This has already given some valuable data to plan effective tobacco control programs. It is a well-known fact that tobacco use starts early in life when apparently, children and teenagers know less about the health effects of tobacco use than adults and are yet to fully appreciate the risk of becoming addicted to nicotine. The tobacco industry is targeting this age group all over the world to hook them with nicotine addiction. It is thus important that countries take this problem very seriously and plan anti-tobacco programmes with special focus on the youth. As noted earlier, the Uganda GYTS 2007 was a replication of an earlier GYTS study done in the country in 2002. The differences in most of the findings were not statistically significant from the GYTS 2002 study. Nonetheless, the discussion below takes into consideration the findings of the Uganda GYTS 2002 as well as GYTS

findings from studies done in neighbouring Kenya and Tanzania so as to put this study's findings into national and regional perspective.

Tobacco use

Overall, the rate of ever smokers at the national level was 15.6%, which was not statistically different from the findings of the 2002 GYTS. The national ever smoker average was similar to that of the GYTS study done in Kenya in 2001, which found 15% of the 13-15-year-olds were ever-smokers. A similar study done in Tanzania in 2003 found a rate of 13% percent. Findings suggest that the rate of smoking among young people in the Eastern African countries is fairly similar, though there are statistical differences among boys and girls, with boys more likely to smoke. This suggests that tobacco control initiatives for young people are urgently needed not only in Uganda but also Kenya and Tanzania.

Access and availability

The 2007 GYTS study reported well over half of the students (62.0%) who smoke bought their cigarettes in a store and were not refused purchase because of their age compared to 62.8 in the 2002 Uganda GYTS study. This compares with Kenya where almost seven out of ten (68.3%) of current smokers who bought cigarettes in a store were not refused. Findings thus suggest an urgent need for legislation banning sales of tobacco products to young people as well as effective implementation of the same.

Media and advertising

The 2007 Uganda GYTS reported that over half (54.7%) of the students in Uganda saw cigarette advertisements on billboards and 51.3% reported seeing such adverts in the print media. This is a marked reduction from the 2002 Uganda GYTS when the rates were 76.0 and 70.5% respectively. The reduction is perhaps the result of the anti-tobacco advertisement regulation adopted by Uganda in the course of the last 4 years as well as the tobacco industry's self-regulation that have come into place in the same period. However, more remains to be done, as the number of young people exposed to tobacco advertisement remains high despite these recent positive developments.

In Kenya over 7 out of 10 students reported having seen a pro-tobacco message in newspapers and magazines in the past 30 days (Kenya GYTS 2001) while in Tanzania 8 out of 10 reported having seen pro-cigarette ads in the past 30 days in that country's 2003 GYTS Survey. More studies are needed to understand in more depth the frequency of this exposure and resultant associated attitudes and behaviours.

School curriculum

The Uganda GYTS 2007 data shows that the students are taught about the dangers of tobacco use (70.5%). Around the same figure in the Kenya 2001 GYTS (77.5) gave the same response compared to 64.5% for the 2003 Tanzania GYTS. This trend is encouraging. However, it would be wise to focus on the quality of this teaching as well as to consider intensifying it so that more students can report exposure to information about the dangers of tobacco use in class.

Cessation

The Uganda 2007 GYTS study found that a majority 7 out of 10 of the students who smoke have expressed a desire to stop and have also made an attempt to stop. The 2001 GYTS Kenya study had a similar finding. Uganda, like Kenya, seems to be is doing well as regards students interest in quitting smoking compared say to neighbouring Tanzania, where a very small number of students expressed a desire to quit or even attempted to quit.

There is thus an urgent need in the country for youth oriented counselling services and smoking cessation programmes to help them to quit smoking.

8. Limitations

The purpose of GYTS studies is to conduct a survey of school going adolescents for the ages 13 to 15 years, which in Uganda is around the first three years of high school. However, in Uganda, a significant number of adolescents of that age do not go to school or have dropped out by this age. This means that this section of the population has not been included in the study. However, studies done in some countries have shown a decreasing trend of tobacco smoking rate and development of favourable attitudes with increasing educational status among young people. As the present study represents the school going adolescents, it does not capture the complete picture. The ongoing universal primary education (UPE) and universal secondary school education (USE) initiatives which have seen greater numbers of young people go to school in Uganda than ever before, has somehow mitigated this factor for this study. However, even then, studies are needed to analyse tobacco prevalence among out of school young people.

9. Recommendations

1. The adolescents were exposed to pro-tobacco advertisement and many of them received free gifts. The ban on tobacco advertisement through electronic media in Uganda is a positive step. Also the reduction in billboard advertising is positive. However, there has to be a total ban on all tobacco advertisement, promotions and sponsorship. To achieve this political commitment and enactment and effective enforcement of anti-tobacco legislation at the national level including full implementation of the Framework Convention on Tobacco Control (FCTC) at global level are essential.
2. Six in 10 students expressed their desire to stop smoking and also had made attempts to do so without success. Thus, the focus as regards the youth should not only be on prevention but also on adolescent oriented smoking cessation programs to help them stop smoking.
3. A substantial number of students were exposed to tobacco smoke at home and public places and over half of the students demanded that tobacco smoking in public places should be banned. There is thus a need for concerted implementation of the laws that ban tobacco smoking in public places, which have already been passed in Uganda.
4. Almost half of the current tobacco users purchased the products in the store they were not refused purchase in spite of their young age. It is therefore imperative that tobacco control laws also prohibit the sale of tobacco products to the minors.

5. The majority of students reported having learnt and discussed in class cigarette smoking and the effects of tobacco use. However, there is need to focus on the nature, comprehensiveness as well as standardisation of anti-smoking training in schools.

10. Conclusions.

This study found that the prevalence of tobacco use among adolescent school students in Uganda is high. In fact, apart from exposure to pro-tobacco messages through media and advertising, there were no statistical differences from the findings of the Uganda GYTS 2007 and the Uganda GYTS 2002 as regards tobacco use, attitudes and related behaviours of school-going 13 to 15 year old adolescents addressed above. This suggests that efforts to address the tobacco problem among young people need to be scaled up. Additionally, there is a need to study the tobacco use situation among out-of-school adolescents in Uganda.

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Appendix 1

Map of Uganda