Report on Global Youth Tobacco Survey (GYTS), Timor Leste, 2006

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Abstract

Timor leste ratified the WHO Framework Convention on Tobacco Control (WHO FCTC) on December 22, 2004. The WHO FCTC requires all Parties to inform all persons of the health consequences of tobacco consumption and exposure to tobacco smoke. Each Party has agreed to develop, implement and evaluate effective tobacco control programs to measure progress in reaching the goals of the WHO FCTC. The Global Youth Tobacco Survey (GYTS) was developed to provide data on youth tobacco use to countries for their development of youth based tobacco control programs. The tobacco control program in Timor Leste has been developed under the Ministry of Health, specifically within the Non-Communicable Diseases unit. Health education concerning tobacco has been done in line with the oral health program which has been conducted annually since 1999 (after the independence). The current tobacco control strategy is mainly focused on the community setting, not yet particularly on schools setting. Data in this report can be used as baseline measures for future evaluation of the tobacco control programs implemented by the Ministry of Health. The key for Timor leste is to implement and enforce the provisions of restricting tobacco access for young people. The GYTS provide information of indicators in measuring achievement of seven WHO FCTC Articles (surveillance and monitoring, prevalence, exposure to secondhand smoke, school-based tobacco control, cessation, media and advertising, and minor's access and availability). Findings from this GYTS Timor Leste 2006 showed several main tobacco issues, include high prevalence of current smokers among the students (32.4%) compared to other South East Asia Region countries. Almost half of the students who currently smoke who usually buy their cigarettes in a store were not refused to purchase cigarette because of their age. Findings from the GYTS can be used as an indication that particular intervention strategy or school based intervention has to be done in the near future.

Acknowledgement

We sincerely thank to the Centers for Disease Control and Prevention Atlanta for the valuable technical support during the survey preparation, implementation, data analyzing, and reporting.

Special thanks also given to the World Health Organization, SEARO New Delhi, particularly the Regional Advisor of Tobacco Free Initiative, for facilitating the implementation of this GYTS Timor Leste.

We also extend our deepest gratitude to Ministry of Health Timor Leste and Ministry of Education Timor Leste, and all of our data collectors for the very important support so the whole survey activities could be successfully carried out.

Lastly, we would like to thank to the National Institute of Health Research and Development, Ministry of Health Indonesia, for permitting the research coordinator to complete this important task in Timor Leste.

Content

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1. Introduction

The World Health Organization (WHO) Framework Convention on Tobacco Control (WHO FCTC) was adopted by the 56th World Health Assembly in May 2003 and became international law on February 27, 2005 (1). Timor Leste signed the FCTC on 25 May 2004 and ratified the treaty on 22 December 2004. The WHO FCTC is the world's first public health treaty on tobacco control. The WHO FCTC provides the driving force and blueprint for the global response to the pandemic of tobacco-induced death and disease. The Convention embodies a coordinated, effective, and urgent action plan to curb tobacco consumption, laying out cost-effective tobacco control strategies for public policies, such as bans on direct and indirect tobacco advertising, tobacco tax and price increases, promoting smoke-free public places and workplaces, and prominent health messages on tobacco packaging. In addition, the Convention encourages countries to address cross-border issues, such as illegal trade and duty-free sales. One important feature of the WHO FCTC is the call for countries to establish programs for national, regional, and global surveillance (Article 20).

> Research, surveillance and exchange of information – The parties shall establish, as appropriate, programs for national, regional and global surveillance of the magnitude, patterns, determinants and consequences of tobacco consumption and exposure to tobacco smoke. Towards this end, the Parties should integrate tobacco surveillance programs into national, regional and global health surveillance programmes so that data are comparable and can be analyzed at the regional and international levels, as appropriate (1).

WHO, the U.S. Centers for Disease Control and Prevention (CDC), and the Canadian Public Health Association (CPHA) developed the Global Tobacco Surveillance System (GTSS) to assist all 192 WHO Member States in establishing continuous tobacco control surveillance and monitoring (2). The GTSS provides a flexible system that includes

common data items but allows countries to include important unique information, at their discretion. It also uses a common survey methodology, similar field procedures for data collection, and similar data management and processing techniques. The GTSS includes collection of data through three surveys: the Global Youth Tobacco Survey (GYTS) for youth, and the Global School Personnel Survey (GSPS) and the Global Health Professional Survey (GHPS) for adults.

The purpose of this paper is to use data from the GYTS conducted in Timor leste in 2006 to monitor Articles in the WHO FCTC. The GYTS has been completed by over 2 million students in 140 countries (3).

2. The Global Youth Tobacco Survey (GYTS)

In 1999, 11 countries (Barbados, China, Fiji, Jordan, Poland, Russian Federation, South Africa, Sri Lanka, Ukraine, Venezuela, and Zimbabwe) pilot-tested the first GYTS (4). All 11 countries completed successful surveys during 1999. After this initial success, many countries asked WHO and CDC for assistance in participating in GYTS. The GYTS data in this report include Timor leste 2006. The school response rate was 96% and the student response rate was 84%.

The GYTS uses a standardized methodology for constructing sampling frames, selecting schools and classes, preparing questionnaires, carrying out field procedures, and processing data. The GYTS includes data on prevalence of cigarette and other tobacco use, perceptions and attitudes about tobacco, access to and availability of tobacco products, exposure to secondhand smoke, school curricula, media and advertising, and smoking cessation.

The GYTS questionnaire is self-administered in classrooms, and school, class, and student anonymity is maintained throughout the GYTS process. Country-specific questionnaires consist of a core set of questions that all countries ask as well as unique country-specific questions. The final country questionnaires are translated in-country into local languages and back-translated to check for accuracy. GYTS country research coordinators conduct focus groups of students aged 13–15 to further test the accuracy of the translation and student understanding of the questions.

The following data are presented in this report: lifetime cigarette use; initiation of smoking before age 10; likely initiation of smoking during the next year among never smokers (i.e., susceptibility)[1]; current cigarette smoking, current use of tobacco products other than cigarettes; dependency on cigarettes among current smokers; exposure to secondhand smoke (SHS) at home; exposure to SHS in public places; desire for a ban on smoking in public places; students who were taught in school about the dangers of smoking, the reasons why young people smoke, or were taught about the effects of smoking on their health; students who saw advertisements for cigarettes on billboards or newspapers or magazines; students who have an object with a cigarette brand logo on it; smokers who want to stop, have tried to stop, and received help to stop smoking; and access and availability to cigarettes among smokers.

[1] Susceptibility, defined as the absence of a firm decision not to smoke, precedes the early experimentation stage of smoking onset. Smoking onset is generally agreed to be a time-dependent, four-level process that includes 1. preparation, 2. early experimentation 3. more advanced regular but non-daily smoking, and 4. a stable level of addiction (5)

3. Methods

The GYTS is a school-based survey of defined geographic sites which can be countries, provinces, cities, or any other sampling frame including sub national areas, non-Member States, or territories. The GYTS uses a two-stage cluster sample design that produces representative samples of students in grades associated with ages 13–15. The sampling frame includes all schools containing any of the identified grades. At the first stage, the probability of schools being selected is proportional to the number of students enrolled in the specified grades. At the second sampling stage, classes within the selected schools are randomly selected. All students in selected classes attending school the day the survey is administered are eligible to participate. Student participation is voluntary and anonymous using self-administered data-collection procedures. The GYTS sample design produces representative, independent, cross-sectional estimates for each site. For cross-site comparisons, data in this paper are limited to students aged 13–15 years old.

A weighting factor is applied to each student record to adjust for non-response (by school, class, and student) and variation in the probability of selection at the school, class, and student levels. A final adjustment sums the weights by grade and gender to the population of school children in the selected grades in each sample site. SUDAAN, a software package for statistical analysis of correlated data, was used to compute standard errors of the estimates and produced 95% confidence intervals which are shown as lower and upper bounds (6).

4. Results

A. Prevalence

Total number of schools selected in national GYTS Timor Leste was 25 schools, and 24 schools were participated. One school has excluded because it is not registered yet in the Ministry of Education. Total number of students selected was 2118 students, and total number of students participated was 1790 students.

Four in 10 (41.5%) students in Timor leste have ever smoked cigarettes, with boys (59.9%) significantly higher than girls (26.0%) (Table 1). Of ever smokers in Timor leste, 20.1% initiated smoking before age 10. A series of questions are used to develop an index of likely initiation of smoking among never smokers (i.e., susceptibility). Among never smokers in Timor leste, 48.8% indicated that they were susceptible to initiate smoking during the next year.

Table 1: Percent of students who had ever smoked cigarettes, ever smoked their first cigarette before age 10, and of students who had never smoked cigarettes those that are likely to initiate smoking in the next year (i.e., susceptible), Timor leste GYTS 2006

Site	Ever smoked cigarettes, even one or two puffs	Ever smokers who initiated smoking before age 10	Never smokers likely to initiate smoking in the next year
National 2006	41.5 (34.3 - 49.0)	20.1 (12.6 - 30.4)	48.8 (41.4 - 56.1)
- Boy	59.9 (50.5 - 68.6)	16.7 (8.4 - 30.6)	51.3 (40.5 - 62.0)
- Girl	26.0 (19.1 - 34.3)	25.6 (15.6 - 38.9)	47.2 (39.4 - 55.2)

Overall, 32.4% of students in Timor leste currently smoked cigarettes, with boys (50.6%) significantly higher than girls (17.3%) (Table 2). Over 2 in 10 (24.1%) students currently used tobacco products other than cigarettes. Over 1 in 10 (13.0%) of current cigarette smokers reported they feel like having a cigarette first thing in the morning (i.e. cigarette dependency).

Table 2: Percent of students who were current cigarette smokers, current users of tobacco products other than cigarettes, and current smokers who feel like having a cigarette first thing in the morning (i.e., dependency on tobacco products), Timor leste GYTS 2006

Site	Current cigarette smokers	Currently use other tobacco products	Current cigarette smokers who feel like having a cigarette first thing in the morning
National 2006	32.4 (25.5 - 40.2)	24.1 (18.9 - 30.1)	13.0 (8.9 - 18.8)
- Boy	50.6 (41.6 - 59.6)	29.0 (22.6 - 36.4)	14.2 (9.3 - 21.2)
- Girl	17.3 (10.7 - 26.8)	20.2 (14.4 - 27.6)	8.7 (3.1 - 22.0)

B. Exposure to Secondhand Smoke (SHS)

Over 6 in 10 (63.2%) students in Timor leste reported that they were exposed to smoke from others in their home (Table 3). Almost 7 in 10 (69.8%) students reported that they were exposed to smoke from others in public places. Four in 10 (39.9%) students thought smoking should be banned in public places.

Table 3: Percent of students exposed to smoke at home, exposed to smoke in public places, and support ban on smoking in public places, Timor leste GYTS 2006

Site	Exposed to smoking from others at home in the past 7 days	Exposed to smoke in public places in the past 7 days	Think smoking should be banned in public places
National 2006	63.2 (56.4 - 69.6)	69.8 (64.3 - 74.8)	39.9 (35.9 - 44.0)
- Boy	66.0 (57.4 - 73.7)	74.2 (68.1 - 79.4)	45.3 (37.9 - 52.9)
- Girl	61.1 (53.0 - 68.6)	65.7 (58.8 - 72.0)	36.2 (30.9 - 41.8)

C Taught in School about the Tobacco

Students were asked if, during the past school year in classes, if they had been taught about the dangers of tobacco, discussed the reasons why young people smoke, or if they had been taught about the effects of tobacco on their health. One-third (33.5%) of the students in Timor leste reported that they had been taught about the dangers of tobacco or

had discussed reasons why people their age smoke (37.3%) (Table 4). Approximately half (44.9%) of students had been taught about the effects of tobacco on their health.

Table 4: Percent of students who were taught dangers of smoking, discussed reasons why people their age use tobacco, or were taught effect of using tobacco, Timor leste GYTS 2006

Site	At school during the past year, taught dangers of smoking tobacco	At school during the past year, discussed reasons why people their age smoke	At school during the past year, taught about the effects of smoking
National 2006	33.5 (28.3 - 39.1)	37.3 (32.3 - 42.6)	44.9 (39.4 - 50.5)
- Boy	40.4 (32.4 - 49.0)	40.9 (32.9 - 49.4)	47.8 (40.0 - 55.8)
- Girl	28.0 (22.9 - 33.7)	34.7 (29.6 - 40.1)	42.5 (36.6 - 48.6)

D. Media and Advertising Exposure

Almost 7 in 10 students in Timor leste reported that they saw advertisements for cigarettes on billboards (66.3%) or saw advertisements for cigarettes in newspapers or magazines (66.3%) in the month prior to the survey (Table 5). Over one-third (34.3%) of the students in Timor leste reported that they had an object (i.e., hat, t-shirt, knapsack, etc) with a cigarette brand logo on it.

Table 5: Percent of students who saw ads on billboards, saw ads in newspapers or magazines, and had an object with a tobacco company logo on it, Timor leste GYTS 2006

Site	Saw ads for cigarettes on billboards in the past month	Saw ads for cigarettes in newspapers or magazines in the past month	Have an object with a cigarette brand logo on it
National 2006	66.3 (56.7 - 74.7)	66.3 (58.5 - 73.4)	34.3 (28.0 - 41.3)
- Boy	68.8 (58.7 - 77.4)	70.1 (62.3 - 76.9)	39.4 (32.5 - 46.9)
- Girl	63.9 (53.5 - 73.2)	62.9 (53.3 - 71.6)	29.8 (22.6 - 38.2)

E. Cessation

Among students who currently smoke cigarettes in Timor leste, 73.7% reported that they want to stop smoking now and 73.6% stated that they tried to stop smoking during the past year but failed (Table 6). Almost 9 in 10 (85.5%) students who currently smoke reported that they had received help to stop smoking.

Table 6: Percent of current smokers who want to quit, who tried to quit, or who received help to quit, Timor leste GYTS 2006

Site	Current cigarette smokers who want to stop smoking now	Current cigarette smokers who tried to stop smoking during the past year	Current smokers who have ever received help to stop smoking
National 2006	73.7 (63.9 - 81.5)	73.6 (58.8 - 84.5)	85.5 (76.7 - 91.4)
- Boy	73.0 (62.0 - 81.8)	72.1 (55.4 - 84.4)	84.0 (73.3 - 91.0)
- Girl	*	*	91.4 (79.3 - 96.7)

* < 35 cases in denominator

F. Access and Availability

Over 2 in 10 (24.1%) students in Timor leste who currently smoke reported that they "usually" bought their tobacco in a store (Table 7). Current smokers who usually buy their tobacco in a store were asked if they had been refused purchase because of their age. Four in 10 (41.2%) reported they had NOT been refused purchase because of their age.

Students were asked if they had been offered "free" cigarettes by a tobacco company representative at any time. Two in 10 (21.9%) students in Timor leste had been offered "free" cigarettes (Table 7).

Table 7: Percent of current smokers who usually buy cigarettes in a store, of those who buy in a store the percent not refused purchase because of their age, and those offered free cigarettes by a tobacco company representative, Timor leste GYTS 2006

Site	Current smokers who usually buy their cigarettes in a store	Current smokers who usually buy their cigarettes in a store who were not refused purchase because of their age	Ever been offered "free" cigarettes by a cigarette company representative
National 2006	24.1 (17.6 - 32.1)	41.2 (26.6 - 57.4)	21.9 (15.7 - 29.6)
- Boy	23.3 (17.4 - 30.5)	*	27.6 (19.8 - 37.0)
- Girl	23.2 (11.4 - 41.7)	*	17.0 (11.7 - 24.2)

* < 35 cases in denominator

5. Discussion

The WHO FCTC and GYTS share the same goal: the development, implementation, and evaluation of effective tobacco control programs in all WHO Member States. What the WHO FCTC asks countries to monitor, the GYTS can help to measure. The GYTS provides indicators for measuring achievement of seven WHO FCTC Articles (surveillance and monitoring, prevalence, exposure to secondhand smoke, school-based tobacco control, cessation, media and advertising, and minor's access and availability). The WHO FCTC calls for countries to use consistent methods and procedures in their surveillance efforts. The GYTS was designed for exactly this purpose (i.e., the sampling procedures, core questionnaire items, training in field procedures, and analysis of data are consistent across all survey sites). Timor leste has followed this example by conducting a national GYTS representing all the 11 districts in the country (2 out of 13 districts were excluded due to geographical problem). The results from this effort can be used to set a baseline for monitoring specific WHO FCTC Articles.

Article 20: Research, surveillance and exchange of information

In terms of tobacco use, Timor leste is a diverse country and having national data can ensure a focused national tobacco control strategy. The data in this report shows current cigarette smoking was substantially different between boys (50.6%) and girls (17.3%). Surprisingly, among the ever smokers, girls has higher percentage of initiated smoking before age 10 than boys (25.6% and 16.7% respectively), even though statistically, it is

not significantly difference. The percentage of current smokers among the students in GYTS Timor Leste (32.4%) was the highest compared to other countries in South East Asia region. The percentage of current smokers in Timor Leste was more than twice as high compared to Indonesia (12.6%). Meanwhile, in comparison with the percentage in Brazil (15.4%) and Cuba (4.2%), the percentage in Timor Leste was also substantially higher. Since 1999, those two countries have given vital support for the Timor Leste health system and development. There were few students who consume other tobacco products Timor leste, most likely, in the rural or remote area in some districts. Chewing tobacco was the most common type of smokeless tobacco in this country. Access to chewing tobacco was not restricted, as students were able to purchase products in local traditional market at a cheaper price compared to manufactured cigarettes. Illegal cigarettes are also traded in Timor Leste, which mostly involves Indonesian cloves (*kretek*) cigarette, 8 in 10 students (83.7%), who currently smoke tobacco, smoked Indonesian clove cigarette. High access of domestically produced Indonesian cigarettes is an important issue that needs to be worked out involving officials from Timor Leste and Indonesia. Good communication and collaboration between Indonesia and Timor Leste in regard to cigarette and health issues are extremely important and should be sustained. In comparison to data from the previous survey (National Household Health Survey 1995), this report showed that the prevalence of current smokers among boys in the GYTS 2006 was higher than the prevalence of current smokers among males age 10 years above in the National Household Health Survey 1995 for Timor Leste data (50.6% and 43.1% respectively) (10). Dissemination of the information is very important for the tobacco control effort in various parts of Timor leste (7-14). In 2006, the Ministry of Health

supported by WHO and CDC Atlanta has completed a national GYTS. Data from this survey will further enhance the capacity of the country to develop, implement, and evaluate tobacco control programs.

Article 8: Protection from exposure to tobacco smoke

In Timor leste, smoking was prohibited in particular public places such as hospitals, airport, health offices, and some schools. Results from this survey showed that more than half of the students exposed to smoke at home as well as at public places, however, only 40% of them think that smoke should be banned in public places. This seems to be related to inadequate knowledge and awareness of tobacco negative impact on health among the students. Specific regulation on environment tobacco smoke as well as public education campaign will be substantially required to prevent occurrence of tobacco related diseases.

Article 12: Education, communication, training and public awareness

Overall, less than one third of the students in Timor leste reported that during the past school year they had been taught about the dangers of smoking and one-third had discussed reasons why people their age smoke. This information calls for development, implementation and evaluation of evidence based programs to be used in schools.

The tobacco control program in Timor Leste has been developed under the Ministry of Health, specifically within the Non-Communicable Diseases unit. Health education concerning tobacco has been done in line with the oral health program which has been conducted annually since 1999 (after the independence) (10). The current tobacco control strategy is mainly focused on the community setting, not particularly on

schools setting. Nevertheless, each school has their own policy applying non smoking area in their school environment.

Tobacco control program in the school based setting has not been developed yet, however, it is already in the plan of action in the collaborating program between Ministry of Health and Ministry of Education.

Article 13: Tobacco advertising, promotion and sponsorship

Tobacco advertising regulation in Timor Leste has not yet been prioritized on the strong prohibition of advertising targeted for younger population. The sports and entertainment activities for young generation were still mostly supported by the cigarette company. Cigarettes manufactures also sometime given free merchandises such as t-shirts, hats, and stickers. Meanwhile, about one third of them have an object with a cigarette brand logo on it. Results from the GYTS showed that more than half of the students saw cigarettes ads on billboard, newspapers and magazines, in the past month.. Obviously, this issue requires substantial attention from the decision makers and policy makers in providing necessary policy and regulation in particularly for controlling any form of the cigarette advertisement. On the other hand, more effective health and anti tobacco advertisement should be developed.

Article 14: Demand reduction measures concerning tobacco dependence and cessation

Seven in 10 current smokers wanted to stop smoking and over 7 in 10 have tried to stop during the past year but have failed. However, more than 8 out of 10 have ever received help to stop smoking. This finding suggests a need to develop, pilot test, and

evaluate potential youth cessation programs. Once effective programs have been identified, they need to be made widely available throughout Timor leste. The cessation program can be also developed in the particular setting which is accessible for the young generation, such as in school or in the local health clinic. The local district health office as well as the local primary health care or clinic, in collaboration with the schools, have important role in developing an effective smoking cessation program. School health program that had been implemented in previous time, should be considered to be evaluated and revised based on the GYTS findings.

Article 16: Sales to and by minors

Cigarettes are available in small shops or street vendor in Timor Leste. Regulation on tobacco use has not yet particularly focused on controlling the tobacco access among young people. Free cigarettes are sometimes given by the cigarette manufacturers as one of their cigarette promotion strategies. Giving free cigarettes is part of tradition in some communities to express thanks, especially among the lower socio-economy groups. One of the provisions in Act 34 is the prohibition of selling tobacco products to minors and prohibition of tobacco sales within 100 yards of educational institutions. GYTS data show over 2 in 10 current smokers usually buy their cigarettes in a store and almost half were not refused purchase because of their age. Obviously, enforcement of minor's access law is a major issue facing Timor leste as well as implementing the prohibition of selling cigarettes or other tobacco product near the educational facilities.

6. CONCLUSION

Data from the GYTS Timor Leste 2006, has showed that smoking is an important issue that requires substantial attention in health program development. Timor Leste has started a good effort by signing the FCTC on 25 May 2004 and ratifying the treaty on 22 December 2004.

The high prevalence of current smokers in Timor Leste can be used as an evidence base for improving the tobacco control program. The results shows that smoking among the younger generation has became the major health issue in Timor Leste. Timor Leste needs to utilize the GYTS data to support the development of their national tobacco control policy and plan of action as recommended in the WHO South-East Asia Regional Office strategy document, "Regional Strategy for Utilization of Global Youth Tobacco Survey Data" (16). Development of an effective comprehensive tobacco control program will require careful monitoring and evaluation of existing programs and the likely development of new efforts. The synergy between Timor leste's leadership in ratifying the WHO FCTC and in supporting the conduct of the GYTS throughout the country offers Timor leste a unique opportunity to develop, implement and evaluate comprehensive tobacco control policy that can be most helpful to Timor leste.

A significant aspect that needs to be considered to follow up the GYTS results includes development of health promotion strategies to control smoking in school as well as in households or the general community setting. Results from the GYTS can be used to persuade government that particular intervention strategy or school based intervention

should be done in the near future. The intervention strategy will be more appropriate if it is comprehensive includes several main points such as improving individual awareness, creating supportive environment particularly in school setting, and policy development to provide regulations to limit access on tobacco use among younger age. There should also be an effective bilateral collaboration in cigarette trading with the neighbor countries including with Indonesia, the major exporter of cigarette product to Timor Leste. Partnership among Ministry of Health and Ministry of Education, UNICEF, and other related stakeholders will make the school-based intervention program more effective. Finally, the local primary health care or health clinic also has an important role in providing the smoking cessation program and coordinating the health program at school in the districts level. Most people turn to the local health clinic first for medical care, so these locations are a favorable entry point for tobacco control program.

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