Tobacco use is one of the major preventable causes of premature death and disease in the world. A disproportionate share of the global tobacco burden falls on developing countries where 84% of the 1.3 billion current smokers live. The Global Youth Tobacco Survey (GYTS), part of the Global Tobacco Surveillance System (GTSS) initiated by the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC) in 1999, was developed to monitor youth tobacco use, attitudes and exposure to tobacco smoke, and has been completed by over 2 million students in 151 countries. A key goal of GTSS is for countries to monitor tobacco control efforts implemented by the country through comparing the results of repeat tobacco surveys at periodic intervals.

Our paper presents findings from the GYTS conducted more than once in five countries in WHO’s South-East Asia Region (SEAR) between 2006 and 2009. The report focuses on changes in the proportion of students who currently used any tobacco products and exposure to Secondhand smoke (SHS) by year.

The GYTS is a school-based survey that collects data from students aged 13–15 years using a standardized methodology for constructing the sample frame, selecting schools and classes, and processing data. Each sampling frame includes all schools in a geographically defined area 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 the selected classes attending school the day the survey is administered are eligible to participate. Student participation is voluntary and anonymous using a self administered questionnaire.

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 and class levels. A final adjustment sums the weights by grade and sex to the population of schoolchildren in the selected grades in each sample site. SUDAAN, a software package for statistical analysis of correlated data, was used to calculate weighted prevalence estimates and standard errors (SE) of the estimates; the 95% confidence intervals (CI) were calculated from the SEs. In this paper differences in proportions are acknowledged if the 95% CIs do not overlap.

The global youth tobacco survey (GYTS) was conducted in India, Bhutan, Indonesia (Java and Sumatra), Thailand and Timor Leste in 2006 and 2009 using a standard protocol that included standard questionnaire with anonymous self administered machine readable answer sheets, field implementation, and analysis. The survey design utilized a two stage cluster sampling with the
school as the first stage and the classroom as the second stage.

Sample sizes and response rates for the surveys by country are presented in Table 1.

The overall response rate ranged from 77.3% in Timor Leste to 99.9% in Thailand in round 2009. Response rate was above 80% in most instances.

Overall current tobacco use among school students aged 13-15 years did not change between 2006 and 2009 in Bhutan, India, and Thailand but showing increasing trend in Indonesia and Timor Leste [Figure 1]. It showed an increasing trend in Indonesia and Timor Leste among boys [Figure 2]; and among girls in Timor Leste [Figure 3]. Overall prevalence of tobacco use in India and Thailand is less as compared to other countries [Figure 2].

Exposure to SHS in homes did not change in Bhutan, India, Thailand and Timor Leste significantly however there was significant increase in exposure to SHS in homes in Indonesia [Figure 4]. Exposure to SHS in public places among school students aged 13-15 years did not improve between 2006 and 2009 in Bhutan, India, Indonesia Thailand and Timor Leste. In Bhutan and India exposure to secondhand smoke in homes and public places were reported significantly lower than other countries [Figures 4 and 5].

Passing comprehensive tobacco control acts in Bhutan,(3) India(4) and Thailand(5) was a public health milestone for these countries. Indonesia and Timor Leste has not formulated national tobacco control legislation. Rise in prevalence of tobacco use and exposure to secondhand smoke in homes [Figure 4] and public places [Figure 5], as compared to Bhutan and India who have formulated national tobacco control legislation, is a clear lesson. Countries in SEAR needs to use the GYTS data to assist in the development of its National Programme for Tobacco Control as recommended in the WHO, “Regional Strategy for Utilization of Global Youth Tobacco Survey Data”.(6)

Health system strengthening, building information system and integration of tobacco control efforts with population and personal services under national noncommunicable disease programmes is required.(7)

Development of an effective comprehensive tobacco control program will require careful monitoring,
enforcement, and evaluation of existing programs and the likely development of new efforts.

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