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Tobacco use, exposure to second-hand smoke, and cessation training among the third-year medical and dental students in selected Member States of South-East Asia region: A trend analysis on data from the Global Health Professions Student Survey, 2005-2011

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Abstract

BACKGROUND: The Medical and Dental Global Health Professions Student Surveys (GHPSS) are surveys based in schools that collect self-administered data from students on the prevalence of tobacco use, exposure to second-hand smoke, and tobacco cessation training, among the third-year medical and dental students. **MATERIALS AND METHODS:** Two rounds of medical and dental GHPSS have been conducted in Bangladesh, India, Myanmar, Nepal, Sri Lanka, and Thailand, among the third-year medical and dental students, between 2005 and 2006 and 2009 and 2011. **RESULTS:** The prevalence of any tobacco use among third-year male and female medical students did not change in Bangladesh, India, and Nepal between 2005 and 2006 and 2009 and 2011; however, it reduced significantly among females in Myanmar (3.3% in 2006 to 1.8% in 2009) and in Sri Lanka (2.5% in 2006 to 0.6% in 2011). The prevalence of any tobacco use among third-year male dental students did not change in Bangladesh, India, Nepal, and Thailand between 2005 and 2006 and 2009 and 2011; however, in Myanmar, the prevalence increased significantly (35.6% in 2006 to 49.5% in 2009). Among the third-year female students, a significant increase in prevalence was noticed in Bangladesh (4.0% in 2005 to 22.2% in 2009) and Thailand (0.7% in 2006 to 2.1% in 2011). It remained unchanged in the other three countries. Prevalence of exposure to second-hand smoke (SHS) both at home and in public places, among medical students, decreased significantly in Myanmar and Sri Lanka between 2006 and 2009 and in 2011. Among dental students, the prevalence of SHS exposure at home reduced significantly in Bangladesh, India, and Myanmar, and in public places in India. However, there was an increase of SHS exposure among dental students in Nepal, both at home and in public places, between 2005 and 2011. Medical students in Myanmar, Nepal, and Sri Lanka reported a declining trend in schools, with a smoking ban policy in place, between 2005 and 2006 and 2009 and 2011, while proportions of dental students reported that schools with a smoking ban policy have increased significantly in Bangladesh and Myanmar. Ever receiving cessation training increased significantly among medical students in Sri Lanka

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only, whereas, among dental students, it increased in India, Nepal, and Thailand. **CONCLUSION:** Trends of tobacco use and exposure to SHS among medical and dental students in most countries of the South-East Asia Region had changed only relatively between the two rounds of GHPSS (2005-2006 and 2009-2011). No significant improvement was observed in the trend in schools with a policy banning smoking in school buildings and clinics. Almost all countries in the SEA Region that participated in GHPSS showed no significant change in ever having received formal training on tobacco cessation among medical and dental students.

Keywords: Cessation training, health professionals, medical and dental students, tobacco use

Introduction

Tobacco use is a public health problem and is one of the top preventable causes of premature death and disease in the world.^[1] Nearly six million people die each year from tobacco-related diseases,^[1] and another 600,000 deaths occur from exposure to second-hand smoke.^[2] If unchecked, the number is expected to go beyond eight million deaths by 2030, with approximately 70% of these deaths occurring in developing countries.^[1] A disproportionate share of the global tobacco burden falls on developing countries, where 84% of the 1.3 billion current smokers reside.^[3]

Medical and dental professionals have been found to play an important role in cessation and prevention of tobacco use among their patients.^[4] A number of studies have shown that the rates of smoking cessation increase after even a brief counseling by health professionals.^[5-8] However, only a few studies have collected information on tobacco use, exposure to second-hand smoke, and training to provide cessation counseling among medical and dental students. Currently, an analysis on the trends of these variables is unavailable. In addition, different studies have used different sampling methods, questionnaires, and data collection procedures, and only a few countries from the low- and middle-income groups have participated.^[9] The World Health Organization, US Centers for Disease Control and Prevention, and the Canadian Public Health Association attempted to standardize the study procedures by developing and implementing the Global Health Professions Student Survey (GHPSS),^[10] which includes surveys for medical, dental, nursing, and pharmacy students.

The information reported in this article is from a GHPSS conducted among the third-year medical and dental students in selected Member States of the South-East Asia Region. The GHPSS have been repeated in Bangladesh, India, Myanmar, Nepal, Sri Lanka, and Thailand. Only countries with repeated surveys have been considered for this article, focusing

on the analysis of the trends of tobacco use, SHS exposure, and tobacco cessation.

Materials and Methods

Design

The GHPSS is a school-based survey for third-year students pursuing advanced degrees in dentistry, medicine, pharmacy, and nursing. GHPSS uses a core questionnaire on demographics, prevalence of cigarette smoking and use of other tobacco products, exposure to second-hand smoke (SHS), desire to quit smoking, and training received to provide patient counseling on cessation techniques. GHPSS has a standardized methodology for selecting the participating schools and has uniform data processing procedures.^[10]

This report includes the GHPSS conducted for medical and dental students in Bangladesh, India, Myanmar, Nepal, Sri Lanka, and Thailand. The GHPSS used a two-stage design, based on the total enrollment of third-year students and the number of schools. In sites where the number of medical students exceeded 1000 and the number of schools was more than 10, a representative sample of schools was selected with the probability proportional to the size, from all third-year students in the schools, and a census of students in the selected schools were surveyed. The GHPSS was conducted in schools during regular lectures and class sessions. Anonymous, self-administered data collection procedures were used. Where appropriate, the English questionnaire was translated into native languages and then back-translated to English, to check for accuracy. SUDAAN, a software package for statistical analysis of complex survey data, was used to calculate the weighted prevalence estimates and standard errors (SE) of the estimates (95% confidence intervals (CI) were calculated from the SEs).^[11] The estimates between two rounds were considered statistically significant if their confidence intervals did not overlap.

For sites conducting the medical GHPSS between 2005 and 2011, the school response rate ranged from 83.3

Table 1: Response rates by country, medical and dental global health professions student surveys, 2005-2011

Country	Year	School response rate (%)	Student response rate (%)	Overall response rate (%)	Number of 3 rd year students
Bangladesh	2006	100	77.0	77.0	777
	2009	100	91.4	91.4	877
India	2005	86.7	89.1	77.2	1176
	2009	100	79.7	79.7	1523
Myanmar	2006	100	87.5	87.5	1430
	2009	100	71.7	71.7	1591
Nepal	2005	83.3	74.9	62.5	327
	2011	91.7	66.5	60.9	671
Sri Lanka	2006	100	78.0	78.0	617
	2011	100	92.9	92.9	1118
Dental					
Bangladesh	2005	77.8	66.3	51.6	205
	2009	100	86.0	86.0	337
India	2005	96.0	93.1	89.4	1339
	2009	93.3	83.6	78.1	711
Myanmar	2006	100	85.2	85.2	264
	2009	100	75.7	75.7	260
Nepal	2005	100	85.3	85.3	88
	2011	100	83.9	83.9	73
Thailand	2006	100	96.1	96.1	411
	2011	100	84.6	84.6	566

to 100%, and the student response rate ranged from 66.5 to 92.9% in the participating countries. Similarly, for the dental GHPSS, the school response rate ranged from 77.8 to 100%, and the student response ranged from 66.3 to 96.1% [Table 1]. The number of students who participated in each survey varied in the countries, due to the number of schools and students in each sample design.

Measurement

This article comprises information on current cigarette smoking, current use of tobacco products other than cigarettes, current use of any tobacco products, exposure to SHS at home and in public places, and the extent to which schools have official policies banning smoking in school buildings and clinics, and if the policies have been enforced. Besides, they have also been asked whether they ever received formal training on such cessation counseling techniques.

In general, both rounds of GHPSS asked whether in the past seven days anyone had smoked other than in their homes and this is referred to here as exposure to SHS in public places. However, in Nepal, Sri Lanka, and Thailand, in the first round of GHPSS, the questionnaire asked whether in the past seven days

anyone had smoked other than in their homes, while in the second round the questionnaire asked whether in the past seven days anyone had smoked in any enclosed/outdoor public places they had visited.

Results

Tobacco use

Trend of tobacco use among medical students

Overall, current cigarette smoking did not change among the third-year medical students in Bangladesh, India, Myanmar, Nepal, and Sri Lanka between 2005 and 2006 and 2009 and 2011. Even as cigarette smoking in these countries showed no change among males, it decreased significantly among females in Sri Lanka (1.1% in 2006 to 0.2% in 2011).

The prevalence of other tobacco use among females decreased significantly in Myanmar (2.7% in 2006 to 0.7% in 2009) and Sri Lanka (1.4% in 2006 to 0.6% in 2011); whereas, it remained unchanged over time in the rest of the countries.

The prevalence of any tobacco use among medical students did not show any change in Bangladesh, India, Myanmar, and Nepal. However, any tobacco use decreased significantly among females in Myanmar (3.3% in 2006 to 1.8% in 2009) and Sri Lanka (2.5% in 2006 to 0.6% in 2011) [Table 2].

Trend of tobacco use among dental students

Current cigarette smoking among third-year dental students increased significantly in Myanmar (21.6% in 2006 to 34.4% in 2009) and in Nepal (17.3% in 2006 to 29.2% in 2011). Prevalence in cigarette smoking among males increased notably in Myanmar (31.2% in 2006 to 44.1% in 2009), while it decreased considerably in Sri Lanka (10.5% in 2006 to 6.8% in 2011). Surprisingly, there was an increase in cigarette smoking among females in Bangladesh (3.3% in 2005 to 8.2% in 2009), but no changes prevalence among in females were observed in the rest of the countries.

The use of other tobacco increased significantly among males in Bangladesh (7.8% in 2005 to 17.9% in 2009), India (5.2% in 2005 to 18.8% in 2009), Myanmar (18.7% in 2006 to 37.0% in 2009), and Thailand (0.8% in 2006 to 2.8% in 2011). Also, a rise in the prevalence was observed among females in Bangladesh (0.9% in 2005 to 17.8% in 2009) and Thailand (0% in 2006 to 2.1% in 2011).

The overall prevalence of any tobacco use did not change significantly in India, Nepal, and Thailand between 2005 and 2006 and 2009 and 2011.

Table 2: Prevalence of current tobacco use among third-year students, by sex and country, medical and dental global health professions student surveys, 2005-2011

Country	Year	Current cigarette smokers			Current users of other tobacco products			Current users of any tobacco products		
		Total % (95% CI)	Male % (95% CI)	Female % (95% CI)	Total % (95% CI)	Male % (95% CI)	Female % (95% CI)	Total % (95% CI)	Male % (95% CI)	Female % (95% CI)
Medical										
Bangladesh	2006	27.2 (20.8-34.8)	46.5 (37.6-55.6)	4.4 (1.2-14.1)	11.9 (4.3-28.7)	13.3 (3.7-38.2)	9.9 (4.6-20.0)	32.6 (22.4-44.6)	49.6 (36.6-62.7)	12.5 (5.1-27.6)
	2009	19.5 (13.2-27.7)	37.3 (21.6-56.3)	1.5 (0.5-5.0)	10.1 (7.0-14.3)	13.1 (8.5-19.6)	7.0 (3.2-14.8)	23.7 (18.0-30.6)	38.9 (24.2-55.9)	8.0 (3.7-16.5)
India	2005	11.6 (8.8-15.2)	17.7 (14.5-21.3)	2.0 (0.9-4.2)	5.4 (3.5-8.3)	7.5 (5.2-10.6)	2.2 (0.8-6.4)	13.5 (10.3-17.4)	19.9 (16.8-23.4)	3.3 (1.3-8.2)
	2009	13.4 (10.3-17.1)	16.5 (13-20.7)	7.0 (4.2-11.5)	11.6 (7.3-18.1)	13.7 (8.8-20.7)	7.5 (3.1-16.7)	21.5 (15.2-29.4)	26.0 (19.3-34.1)	12.3 (6.2-22.8)
Myanmar	2006	12.4 (11.7-13.1)	24.7 (23.5-26.1)	1.2 (0.9-1.6)	11.0 (10.3-11.6)	19.8 (18.6-21.0)	2.7 (2.3-3.2)	16.1 (15.4-16.9)	29.8 (28.4-31.1)	3.3 (2.9-3.9)
	2009	13.4 (12.5-14.3)	23.6 (22.0-25.2)	1.1 (0.7-1.6)	12.7 (11.8-13.6)	22.5 (21.0-24.1)	0.7 (0.4-1.2)	17.8 (16.8-18.9)	30.8 (29.1-32.6)	1.8 (1.3-2.4)
Nepal	2005	23.5 (9.1-48.5)	34.5 (13.1-64.7)	4.0 (1.2-12.5)	14.4 (6.7-28.1)	19.3 (6.8-43.6)	5.4 (1.0-23.9)	29.9 (14.8-51.3)	41.2 (17.3-70.1)	9.3 (4.4-18.7)
	2011	18.1 (16.1-20.2)	28.4 (25.3-31.6)	3.0 (1.9-4.5)	15.2 (13.3-17.2)	21.8 (19.0-24.9)	5.1 (3.7-7.0)	22.4 (20.3-24.7)	32.8 (29.6-36.1)	6.5 (4.9-8.6)
Sri Lanka	2006	4.1 (3.4-5.0)	8.6 (7.0-10.7)	1.1 (0.7-1.8)	3.6 (2.9-4.4)	6.8 (5.4-8.6)	1.4 (0.9-2.1)	6.6 (5.7-7.7)	13.0 (11.0-15.3)	2.5 (1.8-3.4)
	2011	3.2 (3.0-3.5)	7.4 (6.8-8.0)	0.2 (0.1-0.3)	3.0 (2.7-3.2)	6.1 (5.5-6.6)	0.6 (0.5-0.8)	4.9 (4.6-5.2)	10.5 (9.8-11.2)	0.6 (0.5-0.8)
Dental										
Bangladesh	2005	22.2 (18.2-26.8)	46.7 (39.0-54.7)	3.3 (1.6-6.7)	3.9 (2.4-6.5)	7.8 (4.6-13.1)	0.9 (0.2-3.8)	21.7 (17.8-26.1)	44.5 (37.1-52.2)	4.0 (2.1-7.5)
	2009	20.9 (19.2-22.6)	41.0 (37.7-44.4)	8.2 (6.9-9.8)	17.8 (16.3-19.4)	17.9 (15.6-20.5)	17.8 (15.9-19.9)	32.1 (30.2-34.0)	46.8 (43.6-50.0)	22.2 (20.1-24.5)
India	2005	9.6 (6.7-13.6)	14.9 (10.7-20.4)	2.4 (0.8-6.9)	3.7 (1.7-8.1)	5.2 (1.9-13.1)	1.7 (0.6-4.8)	12.0 (8.8-16.1)	17.5 (12.2-24.4)	4.0 (2.1-7.4)
	2009	6.5 (3.8-10.8)	17.5 (10.6-27.4)	1.5 (0.5-4.3)	8.6 (5.3-13.6)	18.8 (14.0-24.8)	3.7 (1.4-9.1)	11.0 (7.2-16.6)	26.1 (19.7-33.6)	3.8 (1.5-9.5)
Myanmar	2006	21.6 (19.5-23.9)	31.2 (28.3-34.3)	3.3 (2.0-5.3)	13.1 (11.5-15.0)	18.7 (16.3-21.3)	2.2 (1.2-4.0)	24.6 (22.5-27.0)	35.6 (32.6-38.7)	3.3 (2.0-5.3)
	2009	34.4 (31.5-37.4)	44.1 (40.6-47.6)	1.6 (0.6-4.4)	29.4 (26.7-32.3)	37.0 (33.7-40.9)	3.4 (1.7-6.7)	39.1 (36.1-34.1)	49.5 (46.0-53.0)	3.4 (1.7-6.7)
Nepal	2005	17.3 (14.0-21.2)	45.4 (36.4-54.8)	7.8 (5.3-11.3)	19.1 (15.7-23.1)	48.3 (39.6-57.0)	6.5 (4.2-9.9)	29.0 (25.0-33.4)	64.1 (55.4-72.0)	14.2 (10.8-18.6)
	2011	29.2 (22.2-37.4)	52.1 (41.0-62.9)	2.7 (0.7-10.1)	20.1 (14.2-27.6)	32.2 (22.7-43.3)	5.4 (2.1-13.6)	33.4 (26.2-41.6)	56.4 (45.6-66.7)	5.4 (2.1-13.6)
Thailand	2006	3.9 (3.5-4.3)	10.5 (9.4-11.8)	0.7 (0.5-1.0)	0.3 (0.2-0.4)	0.8 (0.5-1.3)	0.0	3.9 (3.5-4.2)	10.5 (9.4-11.8)	0.7 (0.5-1.0)
	2011	2.5 (2.0-3.1)	6.8 (5.4-8.6)	0.5 (0.3-0.8)	2.3 (1.8-2.9)	2.8 (1.9-4.0)	2.1 (1.6-2.8)	4.0 (3.4-4.8)	8.4 (6.8-10.2)	2.1 (1.6-2.8)

However, any tobacco use increased among females in Bangladesh (4.0% in 2005 to 22.2% in 2009) and Thailand (0.7% in 2006 to 2.1% in 2011), and among males in Myanmar (35.6% in 2006 to 49.5% in 2009) [Table 2].

Exposure to second-hand smoke

Second-hand smoke exposure among medical students

The prevalence of exposure to second-hand smoke (SHS) both at home and in public places did not change significantly among medical students in Bangladesh, India, and Nepal between 2005 and 2006 and 2009 and 2011. However, SHS exposure at home decreased significantly in Myanmar (54.4% in 2006 to 44.9% in 2009) and Sri Lanka (21.1% in 2006 to 10.8% in 2011). Similarly, SHS exposure in public places reduced significantly in Myanmar (78.5% in 2006 to 70.3% in 2009) and Sri Lanka (54.5% in 2006 to

43.7% in 2011) [Table 3].

Second-hand smoke exposure among dental students

Among dental students, prevalence of SHS exposure significantly declined at home in Bangladesh (65.1% to 51.3%), India (56.4% to 40.0%), Myanmar (68.2% to 59.5%), and in public places in India (68.4% to 52.5%) between 2005 and 2006 and 2009 and 2011. However, SHS exposure increased notably in Nepal both at home (35.2% in 2005 to 53% in 2011) and in public places (54.1% in 2005 to 75.7% in 2011). Thailand also saw increased exposure to SHS at home (27.4% in 2006 to 32.4% in 2011) [Table 3].

Smoking ban policy and cessation training

An official policy banning smoking in school buildings and clinics

The proportion of medical students reporting that their school had an official policy banning smoking in school buildings and clinics decreased significantly in Myanmar (68.1% to 64.1%), Nepal (53.1% to 33.9%), and Sri Lanka (39.4% to 29.7%) between years 2005 and 2006 and years 2009 and 2011 [Figure 1].

Among dental students, there was an upward trend in the proportion reporting their schools had a smoking ban policy in Bangladesh (49.5% in 2005 to 58.0% in 2009) and Myanmar (60.6% in 2006 to 93.0% in 2009). However, in Thailand a downward trend was observed in students reporting that their schools had this policy (44.8% in 2006 to 32.1% in 2011) [Figure 2].

Ever-received cessation training

There was no significant change in the proportion of medical students ever having-received cessation training in Bangladesh, India, and Nepal between 2005 and 2006 and 2009 and 2011. However, cessation training declined significantly in Myanmar (43.7% in 2006 to 28.8% in 2009), whereas, it increased in Sri

Table 3: Exposure to second-hand smoke (at home and public places) among third-year students, by country, medical and dental global health professions student surveys, 2005-2011

Country	Year	In the past seven days, had anyone smoked in their presence or in their home	In the past seven days, had anyone smoked other than in their home
		Total % (95% CI)	Total % (95% CI)
Medical			
Bangladesh	2006	44.7 (24.9-66.3)	77.1 (45.9-93.1)
	2009	47.1 (40.4-54.0)	81.0 (67.0-90.0)
India	2005	42.8 (37.9-47.9)	73.7 (68.9-78.0)
	2009	52.5 (45.8-59.0)	71.4 (66.6-75.8)
Myanmar	2006	54.4 (53.4-55.4)	78.5 (77.6-79.3)
	2009	44.9 (43.6-46.3)	70.3 (69.0-71.5)
Nepal	2005	45.9 (26.1-67.0)	69.3 (48.3-84.5)
	2011	47.8 (45.2-50.4)	80.2 (78.1-82.2) [†]
Sri Lanka	2006	21.1 (19.6-22.7)	54.5 (52.5-56.4)
	2011	10.8 (10.3-11.3)	43.7 (42.9-44.4) [†]
Dental			
Bangladesh	2005	65.1 (60.1-69.8)	75.5 (70.8-79.7)
	2009	51.3 (49.3-53.3)	69.5 (67.6-71.3)
India	2005	56.4 (49.0-63.6)	68.4 (61.4-74.6)
	2009	40.0 (33.4-47.0)	52.5 (43.9-60.9)
Myanmar	2006	68.2 (65.8-70.6)	85.5 (83.5-87.2)
	2009	59.5 (56.4-62.5)	86.4 (84.2-88.4)
Nepal	2005	35.2 (30.9-39.8)	54.1 (49.3-58.8)
	2011	53.0 (44.8-61.0)	75.7 (67.9-82.1) [†]
Thailand	2006	27.4 (26.4-28.4)	62.5 (61.4-63.6)
	2011	32.4 (30.8-34.0)	65.1 (63.4-66.7) [†]

[†]In the first round the questionnaire with 'other than in their home' In the second round with 'enclosed/outdoor public places'

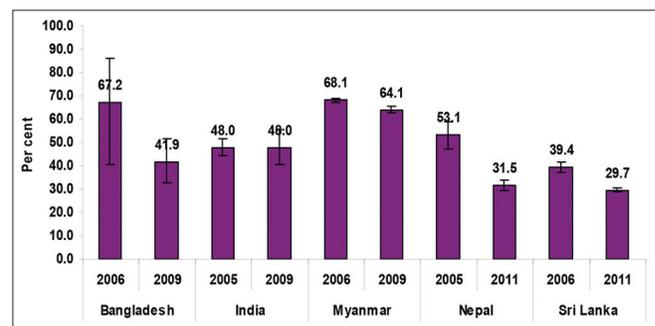


Figure 1: School policy regarding ban on smoking in school buildings and clinics among third-year students, by country, Medical Global Health Professions Student Surveys, 2005-2011

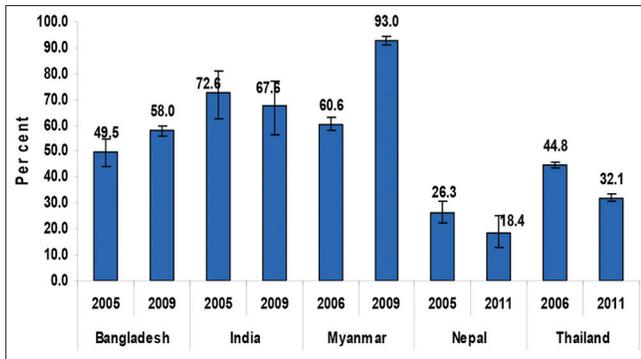


Figure 2: School policy regarding ban on smoking in school buildings and clinics among third-year students, by country, Dental Global Health Professions Student Surveys, 2005-2011

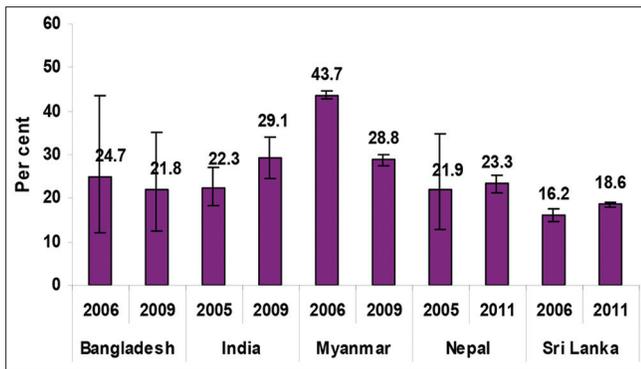


Figure 3: Ever-received formal training in smoking cessation approaches among third-year students, by country, Medical Global Health Professions Student Surveys, 2005-2011

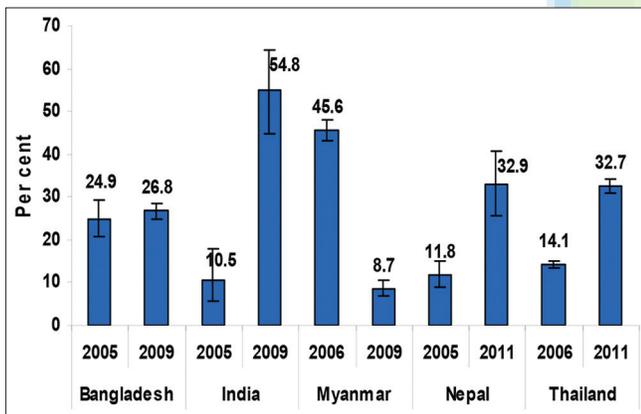


Figure 4: Ever-received formal training in smoking cessation approaches among third-year students, by country, Dental Global Health Professions Student Surveys, 2005-2011

Lanka (16.2% in 2006 to 18.6% in 2011) [Figure 3].

Cessation training for dental students increased significantly in India (10.5% in 2005 to 54.8% in 2009), Nepal (11.8% in 2005 to 32.9% in 2009), and Thailand (14.1% in 2006 to 32.7% in 2011); however, a declining trend was noticed in Myanmar (45.6% in 2006 to 8.7% in 2009) [Figure 4].

Discussion

Tobacco use presents a rare convergence of circumstances: (a) A highly significant health threat; (b) disinclination among clinicians to intervene consistently; and (c) the presence of effective interventions.^[4] Tobacco use among medical students is known to negatively influence these health professionals to be in the way they deliver anti-tobacco counseling, after they start seeing their patients.^[12] Also, it is known that physicians who have healthy personal habits are more likely to discuss relevant preventive behaviors with their patients.^[13] There is no denying that clinicians and dentists play an important role in rendering effective treatment for tobacco use, particularly counseling the patients on cessation. However, most health profession students, irrespective of the discipline, have reported being underprepared to provide effective tobacco cessation counseling.^[10] One study has found that dentists are less active than other health professionals in counseling patients on tobacco cessation.^[14] Studies in developed countries have revealed that dentists are inadequately trained to provide tobacco cessation services to patients.^[15]

Findings from the medical and dental GHPSS (2005-2011) show that there has not been a significant reduction in tobacco use among medical and dental students in the South-East Asia Region between 2005 and 2006 and 2009 and 2011. On the contrary, prevalence of current tobacco users has increased significantly among dental students during the same period. This implies that tobacco use among dental students has not decreased and their continuing to use it may have a negative impact on the mindsets of future health students and affect them later when they start practicing. It is imperative for policy makers, tobacco control agencies, and all responsible individuals to target tobacco users among medical and dental students to try to improve their situation. Health institutions should help their students to quit tobacco use by providing encouragement and information to those who are considering quitting and providing assistance to students who are motivated to quit.

Between 2005 and 2006 and 2009 and 2011, with the exception of Myanmar and Sri Lanka, the findings showed that there was no significant decline in exposure to SHS at home and in public places, among medical students. Likewise, no significant reduction in SHS exposure was observed among dental students; instead in Nepal, SHS exposure in public places increased significantly. This invariably indicated that the SHS exposure at home and in public places among medical and dental students was high and the policy

on smoke-free public places was not being enforced effectively in the countries of the SEA Region included in this study. There is a strong need to reinforce a ban on smoking in all educational institutions and government organizations, and to educate people to make their homes smoke-free in the interest of their family's health.

Trends in students reporting schools and clinics having a policy banning smoking showed no significant changes from 2005 to 2006 and from 2009 to 2011. A smoke-free work environment is known to improve air quality, reduce health problems related to SHS exposure, and the creation of smoke-free areas by health education institutions sends a clear message to educators, students, patients, and clinicians about the negative impact of tobacco.^[16,17] Medical and dental students should be trained to provide effective, accurate, and accessible advice to patients on the harmful effects of smoking.

The medical and dental GHPSS surveyed third-year students, so it was possible that the students received training on patient cessation techniques during the latter years of their programme. The type of training has usually included generic counseling curricula, as a part of community medicine or public health courses. However, the professional training for medical and dental students should include formal training in counseling and tobacco-cessation techniques. The curricula should include a course or supplement to the existing courses, specifically relevant to tobacco issues. If administrators are resistant to make changes in the core curricula, the schools might be encouraged to incorporate tobacco-related modules within the existing courses. It might be beneficial to include the content of tobacco control components within the formal training curricula and in the continuing education courses for medical and dental students.

Further research might help to assess the impact of the existing tobacco control-related materials and training provided in medical and dental schools in a variety of settings, and start expanding what works well and sieve out the ones found not suitable.

Conclusions

Important points from this analysis are

It is clear that tobacco use among medical and dental students in most of the countries in the South-East Asia Region has not decreased significantly between the two rounds of GHPSS (2005-2006 and 2009-2011).

Despite smoke-free legislation and regulations being in

place, the situation of SHS exposure among medical and dental students, both at home and in public places, in most countries of the Region have not improved in the past few years.

Closing the existing gaps in training needs for tobacco cessation assistance skills for medical and dental students remains a major challenge in the Region.

The GHPSS has shown that there was little improvement in meeting the needs for cessation assistance among medical and dental students. In this light, all health institutions could take the support of governments and the relevant agencies to develop and implement appropriate public health interventions that prevent students from using tobacco products. Although the GHPSS helped to evaluate the behavior and attitudes regarding tobacco use among medical and dental students, further research might be required to generate some solid evidence in order to develop effective tobacco-related curricula and educational materials. If tobacco control is to achieve its purpose of reducing tobacco use significantly, investment of resources in improving the quality of education of medical and dental students must be accorded a high priority.

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