Smoking Behavior Among 84 315 Open-University Students in Thailand

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The aim of this study was to estimate the prevalence of smoking among students in an open university in Thailand and to describe smoking patterns in relation to the personal and social characteristics of the sample. A self-administered questionnaire survey was conducted in 2005 with 87 134 open-university students in Thailand; the respondents aged 15 to 60 years ($N = 84\,315$) are the participants in this study. We found a substantial difference in smoking prevalence by sex, with a much higher proportion of smoking male (20.9%) than female (1.0%) students in all sociodemographic categories. Smoking decreased among men with a higher level of education or income; in contrast, among women, higher incomes were associated with more smoking. Most of the smokers started smoking in high school. The findings provide evidence that future policy making should aim to reduce smoking among the younger population in Thailand, and in particular, they point to the need to preserve low smoking rates among women.

Keywords: smoking; Thailand; trends; university students

Introduction

In Thailand, the proportion of smokers in the population has decreased in the past 3 decades from 54.7% in 1976 to 38.8% in 2006 in men and from 6.1% to 2.6% in women, although the intensity of smoking has increased in the same period. Thai smokers consumed an average of 87.6 packs of cigarettes each in 2005 compared with 71 packs per person per year in 2001-2002.^{1,2}

Tobacco ranked as the third highest health risk, after unsafe sex and alcohol, in Thailand, in 2004, and contributed to 5.8% (570 000 DALYs*) of all DALYs lost.³ Smoking does not only pose health risks but also has direct and indirect economic impacts. Apart from income loss or increased expenses for treatment of smoking-related illnesses, the expense of

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*DALY = Disability adjusted life year. It is a time-based measure that combines years of life lost because of premature mortality and years of life lost because of time lived in states of less than full health.

cigarettes can be considered as a household burden because, for example, for the population in Bangkok, 15.7% of monthly personal income was spent on cigarettes in 2003.⁴

Smoking remains widely prevalent among the younger population of 15- to 24-year-olds in Thailand despite some recent improvements in the past 5 years, when the proportion of men who smoked at these ages decreased from 32.1% in 2003 to 29.0% and 26.4% in 2004 and 2006, respectively. These proportions are about half the levels noted in male adults aged 25 to 59 years, for whom the proportions were 49.6% and 48.3% in 2004 and 2006.¹

Prevention of smoking or inducing smoking cessation at younger ages is desirable as it can reduce the health impact to a greater extent than smoking cessation at an older age. There has been no widely conducted study of smoking behavior among the young, specifically among university students in Thailand, and furthermore, available data cover only small samples in specific settings and are not contemporary.⁵ This article describes the results of a large-scale study of distance learning open-university students in Thailand who are from various backgrounds and geographic locations around the country. These findings are intended as a source of information for better-informed and targeted policy making and health education program development.

Methods

As part of the Thai Health Risk Transition Project,⁶ in 2005, a self-administered questionnaire was mailed to all 200 000 students enrolled at Sukhothai Thammathirat Open University (STOU) in Thailand. These students range in age from 15 to 87 years, with most belonging to the 20 to 35 age group. The STOU is 1 of 2 open universities in Thailand and is open to anyone who has completed junior high school and has substantial work experience or those who have completed senior high school or equivalent diploma. Students study externally. In 2000, about 9.0% of the Thai population aged 6 years and older had received tertiary-level education.⁷ These 200 000 students accounted for 4.1% of the population with tertiary education.

Responses were received from 87 134 (44%) students in all regions in the country with ages ranging from 15 to 87 years. Among these, 84 315 of them were between 15 and 60 years old—the age limits of the analyses reported here. They reported a valid smoking status and were included in this analysis.

The survey covered wide-ranging information in 7 domains: (1) sociodemographic status, ethnicity, and the domestic environment in the present and past; (2) occupation, income, and work stresses; (3) self-reported current height (in centimeters) and weight (in kilograms), size at birth (reported to government registers by relatives), whether breast-fed, health history, and insurance and health services use; (4) social networks and trust, religion, spiritual health, and sense of well-being and satisfaction; (5) food sources, preferences and intake, and exercise and physical activity; (6) tobacco and alcohol use, use of transport, and transport injury risks; and (7) respondent's family health background. This survey has been described in more detail by Sleight et al.⁶

Smoking status was derived from 5 questions. The first question was, "Have you ever smoked?" Those who reported they had were then asked the age at which they started ("At what age did you start smoking?"), whether they were still smoking ("Are you still smoking?"), age at which they stopped ("If you have quit smoking, at what age did you stop?"), and the number of cigarettes they smoked each day ("How many cigarettes do you smoke per day now, or did you smoke per day?"). This article presents results from descriptive

analyses of smoking status in relation to sociodemographic–economic factors, including age, sex, education, income, geographic region, marital status, and home location. Smoking status was classified into 3 categories: current smoker, former smoker, and never smoker. The respondents who reported having smoked currently were classified as current smokers, those who reported having smoked and stopped were classified as former smokers, and those who reported that they never smoked were classified as never smokers. These 5 questions related to smoking were also cross-checked with each other. When 2 or more responses were contradictory, the whole record was examined and precedence given to the question involving the most detail concerning smoking. For example, if a student responded by marking the never smoking box and then gave details about age of starting smoking and gave further details about current smoking, that student was classified as a current smoker. Such editing was infrequent and involved less than 100 cases. The analyses were done separately for each sex. Age when smokers started smoking and the number of cigarettes they smoked per day were also analyzed for both current and former smokers.

The analysis was carried out in Stata using cross-tabulation and logistic regression. As the age range for this study is very wide (15–60 years), all results on smoking status by each sociodemographic–economic factor were age adjusted.

The research was approved by the Human Research Ethics Committee (Protocol: 2005/0350) of the Australian National University in late 2005.

Results

Attributes of Respondents

The main characteristics of the sample are shown in Table 1. Gender differences were assessed across sociodemographic variables. Of the 84 315 students included in the analysis, 45.4% ($n = 38\,235$) were male and 54.6% ($n = 46\,080$) were female. A small majority of respondents (53.9%) in the sample was in the younger age group (15–29 years), an age class dominated by women (61.1%), with most of the remainder aged between 30 and 44 years (39.7%). These 3 age groups were selected by using a 15-year cutoff for young, middle-aged, and older age groups. Overall, the most common educational attainment was a high school education (48.4%); women were about a fifth more likely than men to have university education (26.6% vs 22.8%; $P < .001$). Geographically, 24.5% and 17.2% were from the central region and Bangkok, respectively, with only 6.5% from the east. The representation from Bangkok, the north, and the east was very similar to the national population distribution.⁸

The respondents did not on average have a high income. Slightly more than half (54.1%) earned 3001 to 10 000 baht per month or approximately 94 to 313 US dollars.[†] About half (52.7%) were single, with rather more women than men having this status. The respondents were asked whether they had moved home since they were 12 years of age: 31.7% had moved from rural to urban areas and 4.3% from urban to rural areas; the rest remained where they had been living either in rural or urban areas (43.9% rural at both times and 20.1% urban at both times).

Compared with the national adult population, the STOU students are younger with a higher level of education. There are more single persons among the students than in the national population, which could be related to the younger age of the students.

[†]The exchange rate is 33.66 Thai baht for 1 US dollar as of August 4, 2008, according to the Bank of Thailand.

Table 1. General Characteristics of the Sample (N = 84 315)

Sociodemographic Characteristics	Total		Male		Female	
	n	Percentage	n	Percentage	n	Percentage
Sample at their current ages						
15-29 Years	45 427	53.9	17 275	45.2	28 152	61.1
30-44 Years	33 475	39.7	17 376	45.5	16 099	34.9
45-60 Years	5413	6.4	3584	9.4	1829	4.0
Total	84 315	100	38 235	100	46 080	100
Education						
High school	40 704	48.4	20 955	54.9	19 749	43.0
Diploma/Certificate	22 817	27.1	8675	22.2	14 142	30.8
University	20 574	24.5	8515	22.3	12 059	26.2
Total	84 095	100	38 145	100	45 950	100
Region						
Bangkok	14 353	17.2	5547	14.6	8806	19.2
Central	20 480	24.5	8581	22.7	11 899	26.0
North	15 335	18.3	9211	19.7	8189	17.2
Northeast	17 400	20.8	7458	24.4	7877	17.9
East	5143	6.5	4780	6.1	6161	6.2
South	10 941	13.1	2314	12.6	2829	13.5
Total	83 652	100	37 891	100	45 761	100
Personal monthly income						
<3000 Baht	9040	11.0	4318	11.6	9040	10.5
3001-7000 Baht	25 286	30.7	8814	23.6	25 286	36.7
7001-10 000 Baht	19 225	23.4	8582	23.0	19 225	23.7
10 001-20 000 Baht	20 002	24.3	10 607	28.4	20 002	20.9
20 001-30 000 Baht	5164	6.3	2872	7.7	5164	5.1
>30 000 Baht	3531	4.3	2118	5.7	3531	3.1
Total	82 248	100	37 311	100	82 248	100
Marital status						
Single	43 867	52.7	17 208	45.7	26 659	58.5
Married	32 199	38.7	17 503	46.5	14 696	32.2
Others ^a	7217	8.7	1604	7.9	2007	9.3
Total	83 283	100	1359	100	2247	100
Home location when aged 12 years and now						
Rural–Rural	36 551	43.8	17 071	45.3	19 480	42.7
Rural–Urban	26 386	31.7	12 181	32.3	14 205	31.2
Urban–Urban	3605	20.1	1651	18.0	1954	21.8
Urban–Rural	16 761	4.3	6805	4.4	9956	4.3
Total	83 303	100	37 708	100	45 595	100

^aOther marital status covered separated, divorced, and widow.

Smoking by Socioeconomic Factors

Overall, 10.4% of the sample reported being current smokers, whereas 17.3% were former smokers, and 72.3% reported never having smoked. Smoking status differed substantially by sex. Only 1.0% of women were current smokers, in contrast with men, among whom 21.6% reported smoking currently. Similarly, only 4.7% of women but 32.5% of men were former smokers. Thus, the detailed analyses of influences on smoking patterns are restricted to men only.

Table 2 shows age-adjusted prevalence of smoking status in men for each sociodemographic factor. The prevalence of current smoking among men was similar at all ages, with about one fifth reporting the behavior. There was, however, a marked inverse trend in

Table 2. Smoking Status in Men by Each Sociodemographic Factor (n = 38 235)^a

Socioeconomic Status		Smoking Status					
		Current Smoker		Former Smoker		Never Smoker	
		n	Percentage	n	Percentage	n	Percentage
Current age of the sample							
15-29 Years	17 275	3513	20.0	4245	24.6	9517	55.4
30-44 Years	17 376	4029	23.0	6420	37.0	6927	39.9
45-60 Years	3584	708	19.8	1757	49.2	1119	30.9
Education level							
High school	20 955	5187	30.1	7019	34.7	8749	35.1
Diploma/certificate	8675	1857	21.4	2787	32.7	4031	46.0
University degree	8515	1185	13.2	2584	27.6	4746	59.1
Personal income							
<3000 Baht	4318	1005	28.4	1058	30.0	2255	41.6
3001-7000 Baht	8814	2029	24.4	2440	31.3	4345	44.3
7001-10 000 Baht	8582	1845	21.0	2726	33.1	4011	45.9
10 001-20 000 Baht	10 607	2223	19.3	3927	33.1	4457	47.6
20 001-30 000 Baht	2872	534	18.0	1146	28.3	1192	53.3
>30 000 Baht	2118	341	18.0	859	28.1	918	53.4
Marital status							
Single	17 208	3511	20.5	4137	25.6	9560	53.9
Married	17 503	3715	24.0	7011	41.0	6777	34.8
Other marital status ^b	2963	853	28.4	1057	38.3	1053	33.3
Geographic region							
Bangkok	5547	1152	20.6	1756	31.0	2639	48.4
Central	8581	1771	20.3	2700	31.5	4110	48.3
North	7458	2105	18.6	3116	33.8	3990	47.7
Northeast	9211	1404	22.6	2523	33.8	3531	43.7
East	2314	1269	19.6	1432	33.1	2079	47.1
South	4780	456	26.5	765	30.7	1093	43.0
Home location when aged 12 years and now							
Rural–Rural	17 071	3514	20.5	5423	32.5	8134	46.9
Rural–Urban	12 181	2483	19.8	4245	34.1	5453	46.0
Urban–Rural	1651	469	28.2	544	31.1	638	40.7
Urban–Urban	6805	1661	24.2	2027	29.2	3117	46.5

^aThe percentage shown has been age adjusted.^bOther marital status covered divorced, widowed, separated, and living with partners.

prevalence of current smoking with education ($P < .001$) as shown in Table 3, with respondents with a university degree having the lowest proportion of current smokers (13.2%), more than 2 times less than for those with high school education (30.1%). The respondents with a high school education also had more former smokers (34.7%) than other education groups. Likewise, the prevalence also decreased steadily with higher levels of income: 28.4% of those with an income of less than 3000 baht reported currently smoking compared with 18.0% among those with incomes above 30 000 baht. A trend test showed statistical significance ($P < .001$) for both education and income. However, some of the income effects disappeared after adjusting for education (Table 3). Smoking was also somewhat more prevalent in the small group who reported other marital statuses (28.4%) than it was for those who were married (24.0%) or single (20.5%). Apart from an elevation among respondents who resided in the south (26.5% current smokers), there was little difference across geographic regions. Those who were urbanized at young ages reported higher

Table 3. Relationship Between Male Current Smokers and Education and Income Levels (Age Adjusted)

Factor ^a	Odds Ratio		95% Confidence Interval	P (trend)
	Crude	Adjusted		
Education level				.000
High school	1.00	1.00	—	
Diploma/certificate	0.84	0.84	0.8-0.9	
University degree	0.50	0.51	0.5-0.5	
Personal income				.014
<3000 Baht	1.00	1.00	—	
3001-7000 Baht	0.98	1.00	0.9-1.1	
7001-10 000 Baht	0.90	0.98	0.9-1.1	
10 001-20 000 Baht	0.88	0.99	0.9-1.1	
20 001-30 000 Baht	0.75	0.93	0.8-1.1	
>30 000 Baht	0.63	0.80	0.7-0.9	

^aFor education level, secondary education was used as the reference, and for income level, <3000 baht was used as the reference.

Figure 1. Percentage of current smokers by level of personal monthly income.

levels of current smoking (28.2% and 24.2%) than those from rural settings (20.5% and 19.8%).

Among the small numbers of women smoking currently, the relation with income appeared to be opposite to that in males (increasing from 0.9% to 2.5% as income increased from lowest to highest; Figure 1), whereas as far as education was concerned, the proportion of current female smokers was similar across education levels (0.1%).

Table 4. Age When Male Former and Current Smokers Started Smoking, by Birth Cohort

Birth cohort	n	Age When Smoking Commenced				
		≤12 Years (PS)	13-15 Years (JHS)	16-18 Years (SHS)	19-24 Years (Uni)	25+ Years
1987-1990 (Age 15-18 years)	49	12.2	46.9	40.8	-	-
1981-1986 (Age 19-24 years)	2746	6.8	31.7	37.7	23.7	-
1971-1980 (Age 25-34 years)	9026	4.0	29.1	39.4	24.3	3.1
1961-1970 (Age 35-44 years)	5870	3.8	19.8	37.2	32.5	6.8
1945-1960 (Age 45-60 years)	2407	4.4	19.9	37.0	31.0	7.7
Total	20 098	4.4	25.7	38.2	27.4	4.3

Abbreviations: PS, primary school age (year 1-6); JHS, junior high school age (year 7-9); SHS, senior high school ages (year 10-12); Uni, university age.

Age When the Sample Started Smoking

We found in the analysis that the highest proportions of the sample that had smoked had started smoking at the age of 18 years (16.7%) and 15 years (15.6%). Both men and women display similar patterns as regards the age at which they started smoking, which is highly concentrated at 15 to 20 years. When dividing the ages at which smoking started into 5 groups (ie, <12 years [primary school age], 13-15 years [junior high school age], 16-18 years [senior high school age], 19-24 years [university age], and 25 years or over [adult age]), it was found that more than 38.2% of smokers started smoking when they were in senior high school, whereas 27.5% and 25.6% started when they were in university and junior high school, respectively (Table 4). It should also be noted that more recent birth cohorts tended to initiate smoking at an earlier age than the older cohorts.

In Table 5, we see that the age at which respondents started smoking shows a negative relation with parents' education, in that the higher the education level of the parents, the higher the rate of starting smoking during the school ages. Hence, the rate of starting smoking at university and adult age decreased with higher levels of parental education.

Students who had been living in urban homes or who had moved from urban homes were more likely to have started smoking during the school years than those who had been living in rural homes or had moved from rural homes. Respondents who reside in Bangkok and the north and central regions started smoking at younger ages than those who resided in other regions of the country.

Number of Cigarettes Smoked Per Day

More than 25.0% of male current smokers reported smoking 10 cigarettes per day, and another 13.0% and 12.9% reported smoking 5 and 20 cigarettes per day, respectively. There is a clear trend toward an increasing number of cigarettes with age among male current smokers, as shown in Figure 2.

Women smoked fewer cigarettes than men. About half (51.0%) of female current smokers reported smoking 1 to 4 cigarettes per day, and less than 9.0% reported smoking more than 10 cigarettes per day. Female current smokers also smoked less than male current smokers in most age groups with the exception of the 45-to-49 age group, where the mean of number of cigarettes smoked by women was higher than that for men, but the number of female smokers in this age group was very small (n = 10) and much less than the number of male smokers.

Table 5. Association Between Parents' Education, Home Location, and Geographic Region and Starting Smoking at School Age (ie, 18 Years Old or Younger)

Socioeconomic Factor	Started Smoking at School Age (≤18 years)					P, Trend
	Percentage	Crude OR	Adjusted OR ^a	Adjusted OR ^b	95%Confidence Interval	
Mother's education						.001
No formal education	67.9	1.0	1.0	1.0	—	
Primary	67.5	1.1	1.1	1.2	1.1-1.3	
Secondary	72.3	1.4	1.4	1.0	0.9-1.1	
Tertiary	76.7	1.5	1.6	1.1	1.0-1.2	
Father's education						.000
No formal education	69.2	1.0	1.0	1.0	—	
Primary	66.5	1.0	1.0	0.9	0.9-1.0	
Secondary	70.8	1.3	1.3	1.1	1.0-1.3	
Tertiary	75.3	1.3	1.4	1.1	1.0-1.3	
Home location when 12 years old and now						.000
Rural–Rural	67.0	1.0	1.0	1.0	—	
Rural–Urban	66.9	1.0	1.0	1.0	0.9-1.1	
Urban–Rural	74.6	1.5	1.5	1.5	1.3-1.6	
Urban–Urban	72.5	1.2	1.3	1.2	1.1-1.3	
Geographic region						.000
Bangkok	70.7	1.0	1.0	1.0	—	
Central	69.1	1.0	1.0	1.0	0.9-1.3	
North	70.2	1.1	1.1	1.2	1.1-1.3	
Northeast	65.9	0.9	0.9	0.9	0.9-1.0	
East	66.5	1.4	1.4	1.5	1.3-1.6	
South	67.4	0.9	1.0	1.0	0.9-1.1	

Abbreviation: OR, odds ratio.

^aOdds ratios adjusted to age.

^bOdds ratios adjusted to all factors (mother's education, father's education, home location, and region).

Figure 2. Average number of cigarettes smoked per day by male and female current smokers in each age group.

Discussion

This study shows a striking difference in smoking prevalence for male and female students. Only 1.0% of women were current smokers, in contrast with men, among whom 21.5% reported smoking currently. Similarly, only 4.8% of women but 32.6% of men were former smokers. There was no constant age pattern of smoking in male current smokers as the highest proportion of current smokers was among those aged 30 to 44 years, whereas the younger (15-29 years) and older (45-60 years) groups had similar smoking proportions. However, the proportion of former male smokers increased with age: that is, more older respondents had quit smoking than younger ones. However, there is no further information available regarding this because the questionnaire only asked when they had quit but not the reason for quitting. Education and income could play a role in current smoking as the results show an inverse trend of current smoking with education and income.

Most of the sample started smoking at school age, especially at 16 to 18 years. More recent birth cohorts, on average, started smoking at an earlier age than the older birth cohorts. This could in part reflect the increasing proportion of young Thais who grow up in urban environments. Urban environments seem to be more conducive to smoking because we found that students who had been living in urban homes or who had moved from urban homes started smoking at school age compared with those who had been living in rural homes or had moved from rural homes. Surprisingly, the study found a negative relation between starting smoking at school age and parents' education, in that the higher the education level of the parents, the higher the rate of starting smoking at school age. Notably, more than 40% of families with parents having tertiary level of education lived in urban environments. It could be that the prosmoking effect of urban environments outweighed any anti-smoking effect of tertiary educated parents.

This study has some limitations in that it is a self-administered questionnaire survey, which received a response from 44% of the targeted sample. The other 56% who did not respond might have contributed to different results. However, we did note that the respondents were very similar to the overall student body for age, income, geographic area of residence, and occupation, all of which were described in the STOU's annual report for 2005. There are also limitations in the questionnaire itself. For instance, the questionnaire did not define types of cigarettes; it was assumed that all types of cigarettes either manufactured or self-rolled were included; this could have influenced the finding of a higher proportion of current smokers among the lower-income groups as self-rolled cigarettes are comparatively cheaper than the manufactured ones. In addition, the questionnaire asked at what age a former smoker stopped smoking. There were 7 students who responded that they had stopped at their current age and, therefore, may be they should not be considered as former smokers. However, such a small number of potentially misclassified cases should not produce any bias in the analysis.

Despite such limitations, this study has several strengths particularly because it covered a large sample from diverse geographic areas and varied social and educational backgrounds. These features make it very useful for the investigation of factors that influence smoking nationally. Also, because this sample is the younger adult population, they are literally the future of Thailand.

The proportion of current smokers in our sample is significantly lower than that in the general population, which a recent survey has shown to be 49.1% in men and 2.7% in women.⁹ Comparing across age groups, the smoking prevalence is also lower in each age group. These lower numbers can be attributable to the distinct characteristic of this sample who are open-university students with a higher level of education (at least high school) than the general

population. As shown in the results, students with higher levels of education smoked less, further confirming the continuing importance among the young of educational achievement as a potential brake on smoking behavior, as seen in earlier surveys on smoking in the general population.¹⁰ Therefore, education could be a factor contributing to the difference in smoking between the STOU sample and the general population. Education could also help increase awareness of the harms of smoking.

Although smoking prevalence among women is low (1.0% reported as current smokers), there has been a recent 4-fold increase in smoking among Thai women aged 15 to 24 years, from 0.3% in 1999 to 1.3 % in 2006.¹ There is an obvious trend toward increase in smoking for women in the higher income groups of the STOU sample, which could be similar to the situation in the general female population. There should be campaigns against smoking targeting women to halt this trend toward a higher level of smoking among them, thereby preserving their historically low prevalence. Besides, smoking is higher among married men and those with other marital statuses, so female partners could play a role in influencing smoking cessation or preventing smoking in their male partners.

The findings also show that personal income has an influence on smoking and the number of cigarettes smoked per day. The subgroup with low incomes smoked a higher number of cigarettes though it was more likely that they smoked self-rolled cigarettes, which are considerably cheaper than the manufactured or imported cigarettes that are affordable only for those with higher incomes.¹¹ The number of cigarettes smoked by the STOU student sample (9 cigarettes per day) is similar to the number smoked by the general Thai population (10 cigarettes per day on average). In addition, the number of cigarettes smoked by female STOU respondents is much lower than the number smoked by female students in other countries such as Australia.¹² This could be because of cultural barriers, which make smoking an unacceptable behavior for women in Thailand.

Compared with neighboring countries, such as Malaysia, we found that the prevalence of smoking in women younger than 25 years is much lower than the prevalence among Malaysians of the same age.¹³ Moreover, smoking prevalence among Thai students is also lower than that in university students in other countries, both for male and female students.¹³⁻¹⁸ However, studies in many other countries were conducted specifically for on-campus university students, and the sample sizes were much smaller than those in our study, which covers a large number of students from an open university.

When we examined the ages at which our sample started smoking, we found that 95.6% started before the age of 25, and a high proportion started at high school. This can be attributable to peer pressure and an external environment that provided temptations to start smoking. A survey of young adolescents (age 13-15 years) in Thailand found that 20% of respondents thought that boys who smoked were more attractive, and 58.3% responded that boys who smoked had more friends.¹⁹ This might be another reason why boys start smoking at school age. With a high proportion of high school students smoking, health education should focus on this part of the population.

Further analysis and study will be needed, particularly regarding the possible factors contributing to the difference in smoking prevalence between university students and the general population. The findings will provide good evidence for better policy making to reduce smoking prevalence in Thailand. Policies on smoking control in Thailand have been successfully implemented to reduce smoking prevalence by 25% from 1996 to 2006. Better specific target policies, for instance preventing the younger birth cohorts from starting smoking when they are in high school, will help reduce smoking prevalence in Thailand. Besides, research on the health and economic impacts of smoking among university students will alert smokers and make them more aware of the risks involved in smoking.

Conclusion and Recommendations

The study found substantial differences between men and women in the proportion of smokers, with a higher percentage of men smoking in all sociodemographic categories compared with women. A higher proportion of the respondents in the younger age group also smoked.

It is recommended that for better and more effective smoking prevention and control, related policy measures should be formulated specifically for the younger age group in the Thai population and those adults with lower levels of education and income. Also, efforts should be made to preserve the low smoking rate among Thai women.

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