

# CIGARETTE SALES TO WOMEN AND CHILDREN IN URBAN THAILAND

Sansnee Jirojwong

Faculty of Arts, Health and Sciences, Central Queensland University, Rockhampton, Australia

**Abstract.** This descriptive study aimed to document cigarette retailers' knowledge and behaviors about the minimum legal age of cigarette buyers, and their estimates of the proportion of children and women among cigarette buyers. The study was conducted among 70 shop attendants in Hat Yai and Chon Buri cities. A semi-structured interview method was used to collect data using open-ended and close-ended questions. Qualitative data gained from observation and in-depth interviews among six shop owners provided information to support data collected from semi-structured interviews. Cigarettes are sold in small family-run food and household item shops. Although cigarette sales provide limited profits, they were described as essential to attract customers. Twenty-four percent sold only Thai cigarettes, 4% sold only imported cigarettes and 72% sold both. Almost one-third said they did not know the minimum legal age and more than half sold cigarettes to persons younger than 18 years. Single Thai cigarettes were sold to poor customers and to children. A small proportion (13%) said that 50% of their cigarette customers were women. It is possible that women and children were buying for adult males. Although cigarette sales to children younger than 18 years have been prohibited in Thailand for almost ten years, this information was only acknowledged by a small proportion of the shopkeepers. More research is needed on smoking prevalence and the reasons for initiating of smoking in women and children.

## INTRODUCTION

Cigarette smoking is the single most important preventable cause of premature death. Long-term exposure leads to a number of chronic diseases, including cardiovascular diseases and lung cancer (Doll *et al*, 1994; Lopez, 1999). The tobacco industry has implemented various marketing strategies in the Asia-Pacific region to attract women and youths. The percentage of Japanese female smokers increased from 8.6% in 1986 to 13.4% by 1999. Smoking among Japanese women aged 20-29 more than doubled between 1986 and 1999, from 10.5% to 23.2% (WHO, 1999).

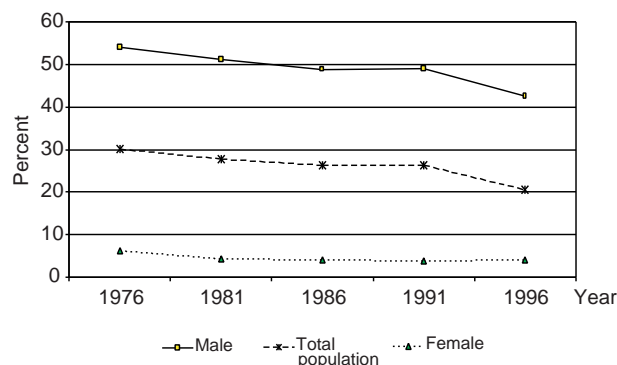
The majority of Thai-speaking women in the North, in particular Chiang Mai Province, have a high risk of lung cancer. Data from the

Cancer Registry in the Northern Region indicated the annual average age-adjusted incidence rates of lung cancer in Chiang Mai were 34.2 and 29.1 per 100,000 for men and women in 1992-1994, respectively. The incidence rate ratio between men and women in Northern Thailand was 1.2, lower than the ratios of 2.3 and 3.0 in the United States of America and Singapore, respectively (Vatanasapt *et al*, 1997; Deerasamee *et al*, 1999). Although recent Thailand national data have shown decreasing prevalence rates of smokers (Fig 1) (National Statistical Office, 1993, 1996; Sirisuk, 1998; Chuprapawan, 2000; Vateesatokit, 2000), there is nevertheless a wide range of smoking rates among males and females, by study location (urban or rural), age (adolescent or adult), type of tobacco product and occupation.

A survey in two rural villages in Northern Thailand found that 61% of a small sample of women living in an area of low lung cancer incidence smoked, compared with 26% of women living in an area of high lung cancer incidence (Nakachi *et al*, 1999) but this study

---

Correspondence: Dr Sansnee Jirojwong, Faculty of Arts, Health and Sciences, Central Queensland University, Rockhampton QLD 4701, Australia.  
Tel: (07) 4930 6317; Fax: (07) 4930 9871  
E-mail: s.jirojwong@cqu.edu.au



Sources: Thailand, National Statistical Office, 1993, 1996; Chuprapawan, 1996; Sirisuk, 1998; Vateesatokit, 2000.

Fig 1—Prevalence rate of smokers, National Data 1976-1996, Thailand.

did not compare the smoking histories of women with lung cancer with those of controls. In northeastern Thailand, Vatanasapt and others (1997) found that 77% of males and 2.3% of females smoked among 9,002 rural adults who participated in cancer screenings. There is thus a large geographical variation in smoking among women within Thailand. In a village near Chiang Mai, Mougne and others (1982) found a high prevalence of smoking in women 50 years and over, and a very low one in those under 30 years. This generational difference seems to have occurred without active health promotion and is unexplained.

The prevalence rates of smokers among young people also vary considerably. The 1996 National Health Survey found that 32.9% of men aged 15-24 years, and 0.7% of women the same age smoked (Chuprapawan, 2000). Tori and Siripanich (1994) found 36.5% of young men aged 13-26 years smoked, while Miles (1998) found 2.0% of girls aged 13-15 years smoked.

Smoking also varies by occupation. Professional persons have a lower rate of smoking than manual workers (Swaddiwudhipong *et al*, 1993; National Statistical Office, 1996). Suriyawongpaisal and Vateesatokit (1991) found, in a small sample medical students, that 29.4% of males and 18.7% of females smoked. Approximately 54.5% of male workers in night-

clubs smoked compared with 10.0% of females (Vitayavirasuk *et al*, 1993). Jirojwong and Manderson (2002) found that 22% of Thai immigrant women in Australia smoked. The variation in these rates could be due to the definition of smoking and the types of cigarettes used by the respondents. Hence, in Thailand, there is considerable variation in smoking rates by geographical area, by gender, over time and by survey (Table 1).

In Thailand, tobacco has been used in various forms. Tobacco dust or snuff (*yaa naat*) is inhaled and some finely cut tobacco may be chewed or sucked over a few hours. Tobacco can be taken alone or with betel leaves and areca nuts. Indigenous household cigarettes are made of finely cut tobacco, wrapped with dried banana leaf, lotus leaf, writing paper or young palm leaves. They are sold at local markets, especially in the north and northeast of Thailand (Sirisuk, 1998). Thai manufactured and indigenous household cigarettes have higher tar and nicotine levels than imported manufactured cigarettes (Simarak *et al*, 1977; Sirisuk, 1998). Reports showed that the majority of rural men and women smoked indigenous household cigarettes, while urban smokers smoked manufactured cigarettes. Only a few surveys have reported on these types of smoking and their prevalence is poorly understood.

Since 1943, the Thailand Tobacco Monopoly has manufactured cigarettes for local and export markets. Cigarette imports became legal in 1990. Thailand has had legislation to reduce the harmful effects of smoking. Legislation includes having health warnings on not less than 25% of the package area, prohibition of cigarette sales to children under 18 years, and prohibition of smoking in closed public buildings (Sirisuk, 1998).

Despite a number of studies that focused on consumers, little is known about the enforcement of tobacco-related legislation. This paper reports a descriptive survey using cigarette vendors as informants about sales to women and children and the vendors' knowledge and behaviors relating to the minimum legal age of cigarette buyers.

Table 1  
Prevalence rates of smokers among Thai population groups, 1977 to 2002.

Study	Participants	Age	Smoking rate (%)	Types of cigarette
Suriyawongpaisal and Vateesatokit (1991)	68 Male medical students, urban	16-25	29.4	Not specified
Swaddiwudhipong <i>et al</i> (1993)	38 Female medical students, urban	≥ 15	18.7	Not specified
	533 Thailand, male and female, urban		32.6	Hand-rolled and manufactured cigarette
	1,003 Thailand, male and female, rural		47.2	Hand-rolled and manufactured cigarette
Tori and Siripanich (1994)	297 Female, urban	13-26	21.9	Hand-rolled and manufactured cigarette
	523 Female, rural		29.8	Hand-rolled and manufactured cigarette
Chuprapawan (2000)	230 Male, Thailand	13-26	36.5	Not specified
	297 Female, Thailand	15-24	10.4	Hand-rolled and manufactured
Miles (1998)	197 Male, Thailand	13-15	32.9	Not specified
	Female, Thailand		2.0	
Suwanteerangul (2000)	404 Male and female students, urban, northern Thailand	Years 7-12, Age not specified	14.6	Not specified
Jirojwong and Manderson (2002)	139 Thai immigrant women in Australia, urban	19-65	22	Not specified

## MATERIALS AND METHODS

A descriptive study was conducted in two major cities; Hat Yai in the Southern Region and Chon Buri in the Eastern Region. The populations per square kilometer in Hat Yai and Chon Buri were 7,252 and 54,280, respectively (Hat Yai City Council, 2001; Chon Buri City Council, 2001). The population per cigarette vendor was approximately 100. Both cities are close to neighboring countries and smuggled cigarettes are easily traded.

Eighty shopkeepers with cigarettes for sale were approached, and 70 agreed to be interviewed (87.5%). Data were collected using a questionnaire with opened-ended and closed-ended questions designed by the researcher. These data included the types of products sold in the shops; the brands of Thai and imported manufactured cigarettes, tobacco, paper and palm leaves; characteristics of the buyers; and the vendors' knowledge and behaviors relating to the minimum legal age of the buyers.

A wide range of shops was systematically selected. As far as possible, equal numbers of shops were selected based on their proximity to schools, government buildings, night-clubs, markets and low socio-economic areas. Displays of cigarettes and the warning messages of the minimum legal age of cigarette buyers were observed to gain additional information to support the interview data. Non-structured in-depth interviews were conducted among six adult male and female smokers and six shop-keepers to clarify some of the data gathered from the interviews. The study was approved by the Faculty of Public Health, Burapha University, Thailand. Quantitative data were analyzed using SPSS version 11 program and presented descriptively in numbers, percentages and means. Qualitative data were analyzed manually to identify themes to support or refute the quantitative data.

## RESULTS

**Participants**

Of 87.5% shopkeepers interviewed, 44 (62.9%) were women and 26 (37.1%) were men; 25 (37.5%) completed only grade 4 of schooling or lower, 7 (10.7%) had diploma degrees and 5 (7.7%) completed tertiary education. Their ages ranged from 13 years to 71 years (mean 42.5 years) and their monthly income was under US\$200 in 18 (33.3%), from US\$200 to 400 in 20 (37.0%), and over US\$400 in 16 (29.7%); there were no data for 16. Details of the characteristics of the shopkeepers are shown in Table 2.

**Shops and cigarettes**

Cigarettes were reported as an essential merchandise, despite a small profit. They attracted customers to the shops. As one shopkeeper put it, "Cigarettes and retail shops are just like a corpse and a coffin". There were 31 shops (47.0%) that sold materials for hand-rolled cigarettes (*yaa saen* and *yaa muan*), paper or palm leaves while 37 (53.0%) did not sell them. These were rolled by the buyers. The shopkeepers reported that the majority of hand-rolled cigarette buyers were young manual workers, older men and poor customers.

A quarter of the shopkeepers (Table 3) (23.9%) sold only Thai-manufactured cigarettes, 71.6% sold both Thai and imported manufactured cigarettes and 4.5% only sold imported manufactured cigarettes. However, 37.8% only sold cigarettes in a pack of 20, 31.9% sold them singly, 9.1% sold imported cigarettes in a pack and sold Thai manufactured cigarettes singly and 21.2% sold a variety of packs. Some reported that poor, children and manual workers smoked selected Thai brands of cigarettes. Similarly, selected imported brands of cigarettes, which were widely known in Thailand, were bought by professionals or wealthy customers. Single imported cigarettes were not sold by any shopkeeper.

**Cigarette sales to children and women**

The cost of hand-rolled, Thai, imported

Table 2  
Characteristics of the shopkeepers of cigarettes in Hat Yai and Chon Buri, 2001.

Shopkeepers' characteristics	Number <sup>a</sup> (%)
<b>Sex</b>	
Male	26 (37.1)
Female	44 (62.9)
<b>Education level</b>	
Grade 4 or lower	25 (38.5)
Grade 9	10 (15.4)
Grade 12	18 (27.7)
Diploma	7 (10.7)
University graduate	5 (7.7)
<b>Age (year)</b>	
Average 42.5 (range 13-71)	
≤ 20	5 (7.8)
21-30	11 (17.2)
31-40	17 (26.6)
41-50	11 (17.2)
51-60	10 (15.6)
≥ 61	10 (15.6)
<b>Monthly income (US\$)</b>	
Average 922 (range 30-6,600)	
30-200	18 (33.3)
201-400	20 (37.0)
401-1,200	9 (16.7)
1,201 and higher	7 (13.0)

<sup>a</sup>Total number may not be equal to 70 due to missing data.

and smuggled cigarettes ranged widely. A package of tobacco and papers or palm leaves sufficient for 10-20 hand-rolled cigarettes costs approximately 16 US cents, while a single Thai manufactured cigarette costs 8 US cents. Only packs of 20 cigarettes were sold in both cities. The retail price of a pack of imported cigarettes ranged between US\$2.20 and US\$2.60, compared with US\$1.20 to US\$2.60 for Thai manufactured cigarettes. Smuggled cigarettes cost 25% less than the same legally-imported brand.

Although 88.6% of shops had a sign displaying the legal minimum age of 18 years, less than half (47.8%) of the shopkeepers knew this legal age. Twelve shopkeepers (18.4%) said that the legal minimum age of cigarette buyers was 15 years, one shopkeeper said the legal minimum age of cigarette buyers was

Table 3  
Reported sales of cigarettes by shopkeepers and characteristics of customers in Hat Yai and Chon Buri, 2001.

Cigarette sales	Number <sup>a</sup> (%)
Types of cigarette	
Hand rolled	
Yes	31 (47.0)
No	35 (53.0)
Manufactured	
Only Thai manufactured	16 (23.9)
Only imported manufactured	3 (4.5)
Thai and imported manufactured	48 (71.6)
Packaging of cigarette sold	
Only packs	25 (37.8)
Imported packs and single Thai manufactured	6 (9.1)
Majority single Thai manufactured	21 (31.9)
Pack, single and carton	14 (21.2)
Reported minimum legal age of cigarette buyers (aged < years)	
≤ 15	12 (18.4)
15-17	1 (1.5)
18	31 (47.7)
Do not know	21 (32.3)
Actual youngest age of cigarette buyers (years)	
6-10	14 (20.0)
11-15	10 (14.3)
16-18	18 (25.7)
> 18	28 (40.0)
Percentage of adolescent cigarette buyers (aged <18 years)	
> 50	8 (11.4)
50	2 (2.9)
11 - 49	21 (30.0)
10	6 (8.6)
< 10	4 (5.7)
No children as customers	19 (27.1)
Do not know	10 (14.3)
Percentage of female cigarette buyers	
50	9 (12.9)
40 - 49	0
30 - 39	5 (7.1)
20 - 29	14 (20.0)
10 - 19	13 (18.6)
< 10	14 (20.0)
No female customers	11 (15.7)
Do not know	5 (5.7)

<sup>a</sup>Total number may not be equal to 70 due to missing data.

between 15-18 and 21 shopkeepers (32.3%) did not know the legal minimum age.

Shopkeepers were asked about the youngest age of buyers who purchased cigarette from their shops. Of 70 shopkeepers, 20.0% estimated that their youngest buyers were aged 6-

10 years, 14.3% 10-15 years, 25.7% between 16-18 years, and 40.0% said that all their cigarette buyers were older than 18 years.

Few shopkeepers reported that they attended health education programs provided by City Councils that explained the legal mini-

minimum age and other tobacco-related legislation. In this sample, there was no enforcement of the legal minimum age for cigarette buyers. Although cigarettes are sold in small family-run food and household item shops, the attendees of the health education programs did not pass on information to other family members who also operated the shops. A few shopkeepers said that they only sold cigarettes to children because they were reassured by the children that cigarettes would be used by their parents. Some would not refuse to sell cigarettes to children because it brought income. Others said that some children bought cigarettes in the presence of their parents.

Only 8 interviewees (11.3%) said that more than 50% of their cigarette buyers were children, while 21 (29.6%) said that approximately 40% of their cigarette buyers ( $n = 21$ , 29.6%) were children. Nine (13.0%) said that 50% of their cigarette buyers were women, while 14 (20.3%) reported that less than 10% were women. A few shopkeepers said that most of their female customers bought cigarettes for their partners, while some bought cigarettes for themselves. Some said that female smokers were poor: manual workers or women working in entertainment services, including night-clubs.

## DISCUSSION

Cigarettes are widely available to the children in this sample. Miles (1998) found only 22% of Thai children aged 13-15 years knew the legal minimum age of cigarette buyers. Although sales to children younger than 18 years have been prohibited in Thailand for almost ten years, this information was only acknowledged by a small proportion of the shopkeepers. Children who buy cigarettes for their parents may be at high risk of subsequent smoking due to the accessibility of cigarettes. Children can afford to buy single Thai-manufactured cigarettes. The high tar and nicotine levels of Thai-manufactured cigarettes is a concern, as it may increase the probability of addiction in children. Imported cigarettes with

lower tar and nicotine levels are, nevertheless, addictive.

Health education programs provided by governments were mentioned by only a few shopkeepers. The information should be regularly delivered and shopkeepers' compliance to the legislation should be monitored. A family-run business with many family members involved in cigarette sales can make it difficult to enforce legislation and should be considered when designing health education programs. Methods of delivering health education messages should be varied and relevant to middle-aged shopkeepers and those with low levels of education.

National studies have shown a decreasing percentage of smokers in Thailand. However, studies that focused on specific groups and geographical areas did not show similar evidence. Further studies need to be conducted to explore social and cultural factors, including the meaning of cigarette smoking, and their influence on the initiation of smoking among children and women, particularly those in rural areas, in the North and among persons of low socio-economic status. The effects of increasing the availability of imported cigarettes on the uptake of cigarettes by women and children also need to be explored.

This study has a number of limitations. It has no data on the prevalence rates of smoking in different groups, nor on the numbers of women and children who buy cigarettes, and the extent to which they may buy for others. The study was conducted in urban areas and is unlikely to cover all types of tobacco smoking, especially traditional types in rural areas. Nevertheless it does indicate a potential increase in smoking among the young due to the easy accessibility of cigarettes and the effects of social change.

## ACKNOWLEDGEMENTS

The author would like to thank the Faculty of Arts, Health and Sciences and the School of Nursing and Health Studies of the Central



Queensland University, Australia, for financial support. She also appreciates the assistance received from the following people: staff at the Faculty of Public Health, Burapha University, Thailand and Waruni Saengmaak. Emeritus Professor Robert MacLennan provided significant input throughout the study process.

## REFERENCES

- Chonburi City Council. Statistics of Chonburi, 2001. Chonburi: Chonburi City Council; 2001 (in Thai) (unpublished data).
- Chuprapawan C, ed. National health survey of Thai population: first survey, 1991-1992. Bangkok: Design Publisher, 1996 (in Thai).
- Chuprapawan C. Health status of Thai population. Nonthaburi: Bureau of Health Policy and Planning, 2000 (in Thai).
- Deerasamee S, Martin N, eds. Cancer in Thailand, Vol II, 1992-1994, IARC Technical Report No. 34. Lyon: International Agency for Research on Cancer, 1999.
- Doll R, Peto R, Wheatley K, Gray R, Sutherland I. Mortality in relation to smoking: 40 years' observations on male British doctors. *Br Med J* 1994; 309: 901-11.
- Hat Yai City Council. Statistics of Hat Yai, 2001. Hat Yai: Hat Yai City Council (in Thai) (unpublished data).
- Jirojwong S, Manderson L. Physical health and preventive health behaviors among Thai women in Brisbane, Australia. *Health Care Women Int* 2002; 23: 197-206.
- Lopez AD. Measuring the health hazards of tobacco: commentary. *Bull WHO* 1999; 77: 82-3.
- Miles G. Prevalence, acceptability and accessibility of tobacco, alcohol and illegal drugs among school children in a rural market town in Isaan, Thailand. *J Popul Soc Stud* 1998; 7: 85-93.
- Mougne C, MacLennan R, Atsana S. Smoking, chewing and drinking in Ban Pong, Northern Thailand. *Soc Sci Med* 1982; 16: 99-106.
- Nakachi K, Limtrakul P, Sonklin P, *et al.* Risk factors for lung cancer among Northern Thai women: epidemiological, nutritional, serological and bacteriological surveys of residents in high-and low-incidence areas. *Jpn J Cancer Res* 1999; 90: 1187-95.
- National Statistical Office, Office of the Prime Minister, Thailand. Report of the 1993 health and social services survey. Bangkok: Uxsornthai Printing, 1993 (in Thai).
- National Statistical Office, Office of the Prime Minister, Thailand. Report of the 1996 health and social services survey. Bangkok: Uxsornthai Printing, 1996 (in Thai).
- Simarak S, de Jong UW, Breslow N, *et al.* Cancer of the oral cavity, pharynx/larynx and lung in North Thailand: case-control study and analysis of cigar smoke. *Br J Cancer* 1977; 36: 130-40.
- Sirisuk W. Cigarettes and the Thai people. Bangkok: The War Veterans Organization of Thailand; 1998. (in Thai).
- Suriyawongpaisal P, Vateesatokit P. Behaviours and attitude of medical students towards cigarette smoking. *Ramathibodi Med J* 1991; 14: 308-16 (in Thai).
- Suwanteerangkul J. Factors associated with smoking of school adolescent in Chiang Mai. *Chiang Mai Med Bull* 2000; 39: 9-19 (in Thai).
- Swaddiwudhipong W, Pisuttakoon K, Khumklam P, *et al.* A survey of tobacco smoking behavior, beliefs and attitudes towards smoking among adults in Mae Sot, Tak Province. *Bull Dept Med Serv* 1993; 18: 467-75 (in Thai).
- Tori CD, Siripanich R. Prevalence and connotative meaning of cigarette smoking among Thai adolescents and young adults. *J Med Assoc Thai* 1994; 77: 378-83.
- Vatanasapt V, Sriamporn S, Suwanrungruang K, Takahashi M. A study of consumption habits: food consumption, smoking, alcoholic liquors consumption and betel nut chewing in Khon Kaen Province. *Srinagarind Med J* 1997; 12 (suppl): 92.
- Vateesatokit P. Special article: Tobacco control in Thailand. *J Environ Med* 2000; 2: 165-80. (in Thai).
- Vitayavirasuk B, Keowkarnkah W, Tantisaranee P. A survey on health problems of welders, painters and nightclub workers in Hat Yai District, Songkhla Province. *Songkla Med J* 1993; 11: 47-55 (in Thai).
- World Health Organization. "Kobe Declaration" calls for a halt to the tobacco menace among women and children [Online]. Press Releases 1999, WHO International Conference on Tobacco and Health, Kobe, Japan 14-18 November 1999. Available: <http://www.who.org/toh/>. Accessed 15 February 2000.