

Perception and Knowledge on Health Risks by Waterpipe Tobacco-Smoking Tourists in a Night Spot of Bangkok, Thailand

Chardsumon Prutipinyo PhD*,
Nitin Bhatt MPH**, Nithat Sirichotiratana DrPH*

* Faculty of Public Health, Mahidol University, Bangkok, Thailand
** Aarambha Nepal Nateshwori Marg, Chabahil-07 Kathmandu, Nepal

Objective: To identify the perception level, and knowledge level of health risks due to waterpipe tobacco smoking, and knowledge about prohibition of waterpipe tobacco smoking, of foreign tourists in Thailand.

Material and Method: This is a descriptive cross-sectional study, carried out among foreign tourists in nightspots on Khao San Road area of Bangkok. Structured interview questionnaire was the data collection instrument for 176 convenience-sampling.

Results: More than half (52.3%) of the foreign tourists had a poor level of perception about waterpipe smoking. Majority of foreign tourists (75.5%) had low level of knowledge on the health risks. More than 50% didn't know about the illegal status of waterpipe smoking in Thailand. Chi-square analysis showed that the region where tourists reside was statistically associated with the perception level regarding waterpipe smoking. Age of waterpipe smoking initiation was associated with the region and gender. Age of tourists was associated with the knowledge on prohibition of waterpipe smoking.

Conclusion: Raising awareness among foreign tourists through media advocacy about the rules and regulations regarding waterpipe smoking is necessary to support tobacco control policy. Strict enforcement of the existing law on prohibiting waterpipe smoking should be implemented, Authorities should inform owners/managers of waterpipe, tobacco-smoking prohibition, and require them to put up prohibition signs in their establishments, in both Thai and English languages.

Keywords: Waterpipe smoking, Tourist perception, Violation of tobacco products control law

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Tobacco is a leading preventable cause of many diseases, with over 5 million deaths annually. With current trend, it is projected that over 8 million will die annually by the year 2030⁽¹⁾. Through globalization, waterpipe tobacco smoking with wide varieties of tobacco products, increased drastically over the last two decades⁽²⁾.

It is claimed that more than 100 million people worldwide smoke waterpipe tobacco daily⁽³⁾. The prevalence among adults was 6% in Pakistan, 4-12% in Arabic Gulf region, 9-12% in Syria, and 15% in Lebanon⁽⁴⁾.

A study among 196 female university students in Egypt reported that 27% smoked cigarettes, 37.8% smoked waterpipe, and 35.2% smoked both types of

tobacco products⁽⁵⁾. Another study among 587 university students in Syria indicated that 62.6% of men and 29.8% of women smoked waterpipe tobacco⁽⁶⁾. A study among 754 students in Thailand, indicated that many of them often smoked waterpipe tobacco (32%) and Muslim students were seen as frequent smokers⁽⁷⁾. The prevalence of waterpipe tobacco smoking in Thailand is not available, since very few studies were conducted.

A study conducted among 689 students in San Diego, USA, indicated that waterpipe tobacco smokers were significantly more likely than non-users of smoke cigarettes too⁽⁸⁾. A qualitative study on perception of smokers and non-smokers in Lebanon, indicated that the availability and affordability, together with influence of media and lack of a policy framework, were factors affecting waterpipe tobacco smoking⁽⁹⁾.

Waterpipe tobacco smoking is illegal in Thailand, but they are available in areas where tourists are congregated. There is a lack of data available

Correspondence to:

Nithat S, Department of Public Health Administration, Faculty of Public Health, Mahidol University, Bangkok 10400, Thailand.
Phone: 0-2664-8833, Fax: 0-2664-8833 ext. 193
E-mail: nithat.sir@mahidol.ac.th

regarding waterpipe tobacco smoking among foreign tourists, who contribute to Thailand's economy with increasing numbers.

Even though waterpipe tobacco smoking has been prohibited since 2003, foreign tourists could be seen smoking waterpipe tobacco in Bangkok nightspots. Since there were no available data about the use and factors effecting waterpipe tobacco smoking among foreign tourists who visited Bangkok, the objective of this study was to assess perception and knowledge on health risks of waterpipe tobacco smoking among foreign tourists at a night spot area of Bangkok.

Material and Method

This is a descriptive cross-sectional study of foreign tourists visiting Khao San road nightspots in Bangkok. The data were collected during February 18-March 2, 2012, by using an interview questionnaire. The questionnaire was developed based on conceptual framework, consists of 4 sections. The first part was demographic data of foreign tourists who participated in the present study. The second part dealt with frequency of waterpipe tobacco smoking and age of initiation, while the third part dealt with perceptions on waterpipe tobacco smoking, and the fourth part was about knowledge of waterpipe tobacco smoking related to health risks and tobacco control policy.

At first, the plan was to collect data between 10 pm to 2 am every night of the week, except holidays/weekends, because owner/manager of nightspots felt that their business would be interrupted, during data collection and was thus not permitted. As it turned out, researchers were able to collect data every night at nightspots on Khao San road.

Since rejection rate may be high in this type of nightspot, the expected samples collected per night (4 hours) were 11. The total number of sample size was calculated by number of nights, times that the number of expected samples collected per night. The minimum sample size was 15 nights time 11 samples per night, equal to 165 samples. Using convenience-sampling technique, 176 samples was collected.

This research study maintained validity through consultation with two experts throughout the study. Simple English language was used to write the questionnaire. Pre-testing of the questionnaire was conducted in similar nightspots to Khao San road, in order to identify the number of samples and the setting. A pilot survey was done among foreign tourists in Bangkok.

Reliability of perception (5 levels of 'Strongly agree', 'Agree', 'Unsure', 'Disagree', 'Strongly disagree') was found to have Cronbach's alpha coefficient of 0.79, while reliability of knowledge (3 levels of 'Yes', 'No', and 'Don't know') had alpha coefficient of 0.81. For 'Perceptions' variable, researchers translated analysis scores into 2 groups. Scores above 60% was assigned 'Good' and scores below 60% was assigned 'Poor'.

This research study emphasized individual's rights. Researchers explained the scope and objectives of the study, with good rapport building prior to interview for data collection. Approval from the respondents was sought and they were informed that data collected from them would be kept confidential. This research study is approved by the ethical committee for human research: number MUPH 2012-053.

Results

Table 1 shows the general characteristics data collected from 176 foreign tourists in nightspots on Khao San road.

Perceptions of waterpipe tobacco smoking by foreign tourists

More than half (52.3%) of foreign tourists interviewed had a poor level of perception, while 38.1% had a fair level of perception, and 9.7% had good perception that waterpipe tobacco smoking was harmful, it was addictive etc.

Knowledge of foreign tourists on health risks of waterpipe tobacco smoking

More than three-quarters (75.5%) of foreign tourists interviewed had a poor level of knowledge on health risks, while 14.1% had a good level of knowledge. About half (50.3%) of foreign tourists interviewed did not know that waterpipe tobacco smoking was illegal in Thailand, while 33.1% thought it was legal to smoke waterpipe tobacco, and only 16.6% knew that it was illegal.

Bivariate analyses were used as inferential statistics for testing relationship between dependent and independent variables in the present study. Chi-square test was used in bi-variate analysis to calculate p-value along with odds ratio (OR) and 95% confident interval (CI) of OR.

Additionally, correlation was also used. Categorical variables were merged into two categories for Chi-square test, when the expected frequency was

found to be less than 5. A significant level of 95% was used during the analysis of data and p-value less than 0.05 was considered statistically significant. Results from the analysis indicated association between perceptions and region of foreign tourists with odds ratio of 3.3 times.

Table 3 summarized the association between variables. None of the variables were found to be associated with the knowledge level on prohibition of waterpipe smoking in Thailand, except for age group of respondents with p-value of 0.032.

General characteristics, waterpipe smoking status and age of starting smoking waterpipe. The general characteristics variables: sex, age, and region of respondents were found to associated with the age of starting smoking waterpipe with p-values = 0.004, and 0.036, respectively. Region was found to be associated with the age of starting smoking waterpipe. Table 4 summarizes the association between variables. Sex, region and frequency of smoking were found to be associated with age of starting smoking waterpipe tobacco.

Discussion

Sugathan and team⁽¹⁰⁾ found that 34.4% of waterpipe tobacco smokers in Libya were in the age

group of 35-44 years, while a study in the US found that 60% indicated the age of initiation to waterpipe tobacco smoking was at or before age 18⁽¹¹⁾. In the present study, the mean initiating age of foreign tourists smoking waterpipe tobacco is 18.78 years old. In a study among university students in Syria, 49.7% believed that waterpipe tobacco smoke was more harmful to health than cigarettes⁽¹²⁾. In this present study, 54.5% of foreign tourists agreed that waterpipe tobacco smoking was more harmful to health than cigarettes. While in a survey of 235 hookah users, 58.3% believed that hookah is less harmful than cigarette smoking⁽¹³⁾. In the present study 58% of foreign tourists disagreed that waterpipe smoking can be addictive. In a survey among hookah smokers, the majority of smokers believed that their risk of addiction is minimal⁽¹⁵⁾.

There is alarming prevalence of waterpipe tobacco smoking among school students in the US^(4,15,16). A comparison of cigarette and water-pipe smoking by Arab and non-Arab-American youth among university students in the United Kingdom showed that waterpipe smoking among student was as follows: prevalence, risk factors, symptoms of addiction, and smoke intake. Evidence from one British university and the US⁽¹⁷⁾, showed prevalence of an association with waterpipe tobacco smoking among US university

Table 1. General characteristics of respondents

Characteristics	Number	Percentage
Sex of the respondents*		
Male	103	58.5
Female	73	41.5
Age of the respondents*		
18-24 years	80	45.5
25-44 years	88	50.0
45-64 years	8	4.5
≥65	0	0
Region of respondents**		
WHO African region	3	1.7
WHO Eastern Mediterranean region	1	0.6
WHO European region	117	66.5
WHO region of Americas	36	20.5
WHO SEAR	4	2.3
WHO Western Pacific region	14	8.0
Educational status of respondents*		
No formal schooling	4	2.3
Less than high school	3	1.7
High school level to diploma level	60	34.1
University level	109	61.9

* valid cases = 176; ** valid cases = 175

Table 2. Chi-square test between general characteristics, waterpipe smoking status and perception regarding waterpipe smoking

General characteristics	n	Perception (%)		χ^2	OR	p-value	95% CI
		Good	Poor				
Sex*							
Male	103	12 (11.7)	91 (88.3)	1.129	1.793	0.288	0.603-5.332
Female	73	5 (6.8)	68 (93.2)				
Age (years)*							
18-24	80	7 (8.8)	73 (91.3)	0.139	0.825	0.709	0.299-2.276
25-44	96	10 (10.4)	86 (86.9)				
Education*							
High school to diploma level	67	4 (6.0)	63 (94.0)	1.687	0.469	0.194	0.146-1.503
University level	109	13 (11.9)	96 (88.1)				
Region of respondents*							
Other than Euro region	58	10 (17.2)	48 (82.8)	5.700	3.304	0.017	1.187-9.194
WHO Euro region	118	7 (5.9)	111 (94.1)				
Frequency of smoking*							
Once a week	45	6 (13.3)	39 (86.7)	0.935	1.678	0.333	0.582-4.836
More than 4 times a week	131	11 (8.4)	120 (91.6)				
Age of starting waterpipe**							
≤18 years	103	11 (10.7)	92 (89.3)	0.158	1.236	0.691	0.434-3.515
>18 years	68	6 (8.8)	62 (91.2)				

* valid cases = 176; ** valid cases = 171

Table 3. Chi-square test between general characteristics, waterpipe smoking status and knowledge on prohibition of waterpipe smoking in Thailand

General characteristics	n	Knowledge (%)			χ^2	p-value
		Yes	No	Don't know		
Sex*						
Male	103	18 (17.5)	31 (30.1)	54 (52.4)	1.053	0.591
Female	72	11 (15.3)	27 (37.5)	34 (47.2)		
Age (years)*						
18-24	79	7 (8.9)	31 (39.2)	41 (51.9)	6.857	0.032
25-44	96	22 (22.9)	27 (28.1)	47 (49.0)		
Education*						
High school to diploma level	66	8 (12.1)	28 (42.5)	30 (45.5)	4.512	0.105
University level	109	21 (12.2)	30 (87.8)	58 (53.2)		
Region of respondents*						
Other than European region	58	12 (20.7)	15 (25.9)	31 (53.4)	2.448	0.294
WHO European region	117	17 (14.5)	43 (36.8)	57 (48.7)		
Frequency of smoking*						
Once a week	44	10 (22.7)	13 (29.5)	21 (47.7)	1.650	0.438
More than 4 times a week	131	19 (14.5)	45 (34.4)	67 (51.1)		
Age of starting waterpipe**						
≤18 years	103	18 (17.5)	32 (31.1)	53 (51.5)	0.432	0.806
>18 years	68	10 (14.7)	24 (35.3)	34 (50.0)		

* valid cases = 175; ** valid cases = 171

Table 4. Chi-square test between general characteristics, waterpipe smoking status and age of starting smoking waterpipe

General characteristics	n	Age		χ^2	OR	p-value	95% CI
		≤18 years	>18 years				
Sex*							
Male	99	60 (66.7)	33 (33.3)	4.062	1.892	0.004	1.015-3.528
Female	72	37 (51.4)	35 (48.6)				
Education*							
High school to diploma level	63	39 (61.9)	24 (38.1)	0.116	1.117	0.733	0.591-2.113
University level	108	64 (59.3)	44 (40.7)				
Region of respondents*							
Other than European region	63	28 (49.1)	29 (50.9)	4.407	0.502	0.036	0.263-0.959
WHO European region	108	75 (65.8)	39 (34.2)				
Frequency of smoking*							
Once a week	42	29 (69.0)	13 (31.0)	1.806	1.658	0.179	0.790-3.480
More than 4 times a week	129	74 (57.4)	55 (42.6)				

* valid cases = 171

students and among adults in Australia^(18,19).

Surveys of youth and young adults reveal that this population believes they will experience fewer effects on their health from waterpipe tobacco smoking than from cigarette smoking^(14,20). Studies conducted in Egypt, Israel and Syria have found that in general, people know little about its effects on health, but believe that it is less harmful than cigarette smoking⁽²⁰⁾.

The strength of the present study is that, to our knowledge, it is the first study on waterpipe tobacco smoking among foreign tourists in Bangkok, Thailand. Seventy-five percent of participating foreign tourists had a poor knowledge of the health risks from waterpipe smoking. Even though waterpipe tobacco smoking was labeled as an ‘emerging deadly trend⁽²¹⁾, and the World Health Organization issued an advisory note on waterpipe tobacco smoking⁽²⁾, it is widely believed to be a less harmful form of tobacco smoking^(4,12,22,23).

Surveys of youth and young adults reveal that this population believes they will experience fewer health effects from waterpipe tobacco smoking than from cigarette smoking^(14,19). Studies conducted in Egypt, Israel and Syria have found that in general, people know little about its health effects and believe that it is less harmful than cigarette smoking⁽²⁰⁾.

In the present study results indicated that more than half (52.3%) of foreign tourists interviewed had a poor level of perception, while 38.1% had a fair level of perception while 9.7% had good perception that waterpipe tobacco smoking was harmful to health. More than three-quarters (75.5%) of foreign tourists

interviewed had a poor level of knowledge on health risks, while 14.1% had good level of knowledge. About half (50.3%) of foreign tourists interviewed did not know that waterpipe tobacco smoking was illegal in Thailand, while 33.1% thought it was legal to smoke waterpipe tobacco, and only 16.6% knew that it was illegal to smoke waterpipe tobacco in Thailand.

Only region (where the foreign tourists reside) was found to be associated with perception regarding waterpipe tobacco smoking, while age group was found to be associated with the knowledge on prohibition of waterpipe smoking in Thailand.

Strict enforcement of the existing law for waterpipe smoking is necessary. According to Thailand’s Tobacco Products Control Act of 2535 BE, importation, production and sales of waterpipe tobacco have been prohibited since August 2003, but it is common practice at nightspots where tourists visit to enjoy nightlife. Strict enforcement of existing law is needed to support the policy for tobacco control.

Increased awareness through media advocacy is necessary. Raising awareness or public education among the foreigners about the rules and regulations regarding waterpipe is necessary to stop the illegal behavior.

Authorities should inform owners/managers of establishments (bars, nightclubs, restaurants, etc) that it is illegal to smoke waterpipe tobacco, and should require them to put up signs in both Thai and English language to inform foreign tourists about prohibition of waterpipe tobacco smoking in Thailand.

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Potential conflicts of interest

None.

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การรับรู้และความรู้เกี่ยวกับความเสี่ยงทางสุขภาพจากการสูบบุหรี่น้ำของนักท่องเที่ยวในแหล่งสถาน บันเทิงแห่งหนึ่งของกรุงเทพ ประเทศไทย

ฉัตรสุมน พฤตภิญโญ, Nitin Bhatt, นิติน สิริโชติรัตน์

วัตถุประสงค์: เพื่อหาระดับการรับรู้และความรู้เกี่ยวกับความเสี่ยงทางสุขภาพ และระดับความรู้เกี่ยวกับกฎหมายการห้าม
สูบบุหรี่น้ำของนักท่องเที่ยวชาวต่างประเทศที่มาเที่ยวในประเทศไทย

วัสดุและวิธีการ: การวิจัยเชิงพรรณนาแบบภาคตัดขวาง ศึกษาที่ถนนข้าวสาร กรุงเทพ โดยใช้แบบสัมภาษณ์นักท่องเที่ยว
เป็นเครื่องมือในการเก็บข้อมูล ใช้การสุ่มตัวอย่างแบบเจาะจง มีขนาดของกลุ่มตัวอย่างเท่ากับ 176 ราย

ผลการศึกษา: นักท่องเที่ยวมากกว่าครึ่ง (52.3%) มีการรับรู้ความเสี่ยงทางสุขภาพในระดับที่ไม่สูงและสามในสี่ (75.5%)
มีความรู้เกี่ยวกับความเสี่ยงทางสุขภาพในระดับต่ำ นักท่องเที่ยวมากกว่า 50% ไม่ทราบว่าสูบบุหรี่น้ำเป็นสิ่งที่ผิดกฎหมาย
ในประเทศไทย ผลการวิเคราะห์ทางสถิติ โดยไค-สแควร์ พบว่าภูมิภาคของถิ่นที่อยู่อาศัยของนักท่องเที่ยวมีความสัมพันธ์กับ
ระดับความรู้ที่นึกคิดเกี่ยวกับการสูบบุหรี่น้ำ อายุมีความสัมพันธ์กับความรู้ เกี่ยวกับกฎหมายการห้ามสูบบุหรี่น้ำ

สรุป: การสร้างความตระหนักในกลุ่มนักท่องเที่ยวโดยผ่านทางช่องทางสื่อมวลชนเกี่ยวกับกฎหมาย การห้ามสูบบุหรี่น้ำ
เป็นสิ่งจำเป็นควบคู่กับการบังคับใช้กฎหมายอย่างเข้มงวดโดยการแจ้งให้ผู้ประกอบการทราบถึง กฎหมายควบคุมผลิตภัณฑ์ยาสูบ
และให้ดำเนินการติดป้ายประกาศการห้ามสูบบุหรี่น้ำในสถานประกอบการ ทั้งภาษาไทยและภาษาต่างประเทศ
