

PREVALENCE OF CIGARETTE SMOKING AND FACTORS INFLUENCING CIGARETTE SMOKING BEHAVIOUR AMONG ADULT MYANMAR MIGRANT WORKERS IN MAHACHAI SUB-DISTRICT, SAMUT SAKHON PROVINCE, THAILAND

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ABSTRACT: A cross-sectional study was carried out in Mahachai sub-district, Samut Sakhon Province, Thailand, in February, 2009. Through the use of PRECEDE model, this study was aimed to determine the prevalence of cigarette smoking and factors influencing the cigarette smoking behaviour among adult Myanmar migrant workers in the study site. Three hundred and forty-seven adult Myanmar migrant workers aged between 18-59 years old living in the area were interviewed by using a structured interview questionnaire. Overall prevalence of cigarette smoking were 35.2% with 59.2% of male current smokers and 8.0% of female current smokers. Regarding predisposing factors, cigarette smoking behaviour had an association with gender ($p < 0.001$) and ethnicity ($p < 0.05$). Cigarette smoking behaviour associated with attitude on cigarette smoking ($p < 0.05$). In terms of reinforcing factors, there was a relationship between cigarette smoking behaviour and acquainted people of the respondents as well as with a designation of smoke-free workplace and living quarter. For an accessibility to cigarette market among current smokers as enabling factors, monthly expenditure on cigarette purchase had an association with cigarette smoking behaviour ($p < 0.001$). In conclusion, smoke-free workplace and living quarter for environmental support intervention and awareness-building should be implemented for Myanmar migrant workers. The acquainted people, who highly influence on smoking of the respondents, should be informed about smoking hazard and their being the source of smoking.

Keywords: prevalence, smoking behaviour, migrant

INTRODUCTION: Cigarette smoking is the single most preventable cause of death in the world today¹. Cigarette smoking-attributable diseases kill one in ten adults globally. By 2030, if the current trends keep on going, cigarette smoking will kill one in every six people and half of long-term smokers will die from tobacco². The prevalence of smoking in the South East Asia Region ranges between 25.7% and 59.6% in adult men and 1.7% and 28.7% in adult women³. Over 1.2 million migrants in Thailand are Myanmar⁴. As a matter of fact, Myanmar migrants have to cope with changes in new environment, different culture and society. They must work in crowded surroundings and must stay in poor living condition. These conditions cause Myanmar migrants stress and may lead them to cigarette smoking. The aim of this present study was to identify the prevalence of cigarette smoking among adult Myanmar migrant workers and to identify the predisposing, enabling and reinforcing factors which influenced cigarette smoking behaviour among adult Myanmar migrant workers which

counted as the fourth educational diagnosis phase of the PRECEDE model⁵. PRECEDE is abbreviated from “Predisposing, Reinforcing, Enabling Causes in Educational Diagnosis and Evaluation”. It is the model for health behaviors based on multi-assumptions before designing an appropriate intervention. It is expected that the study result will provide a new body of knowledge on the issue and a possible driving mechanism for public policy on the agenda.

MATERIALS AND METHODS: A cross-sectional study was employed to answer the research questions. Data collection was at Mahachai sub-district, Samut Sakhon Province, Thailand, in February 2009. The respondents were adult Myanmar migrant workers (aged 18-59 years) both males and females who resided in the study site. Multistage sampling method was used with the inclusion criteria that respondents were adult Myanmar migrant workers, aged 18-59 years, male and female, who could communicate in Burmese language, and were willing to participate in the study. Those who could not fit

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in these criteria were excluded. Migrant populations in Thailand are very large and disperse and it might be impossible to construct an up-to-date migrant communities. A solution to these problems was to use a multistage cluster sampling⁶. At the first stage of multistage sampling method, Samut Sakhon province was selected because Myanmar migrant communities was so crowded in that place, Maung district was chosen at second stage and then Mahachai sub-district which contains 32 migrant communities was selected randomly. One community was selected randomly and all adult Myanmar migrants in that community had an equal chance to be selected. Three hundred and forty-seven respondents were interviewed with a structured interview questionnaire which passed the Ethical Review Committee for Research Involving Human Research Subjects, Health Sciences Group, Chulalongkorn University, Bangkok, Thailand, COA no. 008/ 2009 issued on 12 January 2009. The respondents would respond to the 5 parts of the questionnaire: general characteristics, knowledge about cigarette smoking and its harmful health consequences, attitude on cigarette smoking, influences on cigarette smoking and accessibility to cigarette market. For data analysis, Pearson's Chi-square and Fisher's Exact test were used to determine the relationship between two categorical variables and Mann-Whitney U test was used to determine the relationship between continuous variable and dichotomous variable.

RESULTS: For the predisposing factors, the mean age of the respondents was 28.76 years and median was 28 years (SD=7.829). Male were 184 (53.0%) and female were 163 (47.0%). Most of the respondents were Burmese (68.3%). Overall prevalence of current smoker was 35.2%, ex-smoker was 2.3% and non-smoker was 62.5%. Prevalence among males and females was 59.2% and 8.0% respectively. The average start smoking age was 19.33 years, median was 19 years and SD was 3.34.

The scores of knowledge about tobacco control law and the harmful health consequences of cigarette smoking and attitude

about cigarette smoking were categorized into 3 levels according to Bloom classification⁷: low, moderate, and high. The cutting point for high level was more than 80% of total scores, moderate level was 60% - 80% of total scores, and low level was less than 60% of total scores. Nearly half of the respondents (49.0%) had moderate knowledge about cigarette smoking and its harmful health consequences while most of them (78.7%) had high attitude about cigarette smoking (Table 1).

Table 1 Level of knowledge and attitude on cigarette smoking (n=347)

	Knowledge level	Attitude level
	N (%)	N (%)
Low	118 (34.0)	7 (2.0)
Moderate	170 (49.0)	67 (19.3)
High	59 (17.0)	273 (78.7)
Total	347 (100.0)	347 (100.0)

The respondents, 57.1% and 22.5% had the father smoking and mother smoking respectively. In addition, 51.0% and 62.0% of the respondents had family member smoking and close friend smoking. The respondents (83.0%) had smoke-free work place and 64.6% of them had smoke-free living place. Current smokers among Myanmar migrant workers responded that cigarettes can be got easily (82.0%). The availability of cigarette nearby working and living place was 85.2% and 96.7% respectively. Mean of monthly expenditure for cigarette was 340 Thai baht. Male smoking was significantly higher than female smoking ($p<0.001$). Mon smoked more than other ethnic groups ($p=0.015$) (Table 2). There was no significant relationship between knowledge and cigarette smoking behaviour but there was highly significant relationship between attitude and cigarette smoking behaviour ($p=0.002$) (Table 3).

Table 4 shows the relationship between reinforcing factors and cigarette smoking behaviour. Cigarette smoking proportion of the respondents who had parent smoking was higher than that of the respondents who had no parent smoking. Peer smoking was

strongly associated with cigarette smoking behaviour ($p < 0.001$). Employer smoking had a strong relationship with cigarette smoking ($p < 0.01$). Designation of smoke-free workplace and living quarters was inversely related with

the cigarette smoking behaviour. Accessibility to cigarette market had a strong relationship with monthly expenditure of cigarette purchase among current smoker ($p < 0.001$) (Table 5).

Table 2 Association between characteristics of the respondents and cigarette smoking behaviour (n=347)

Characteristics	Current Smoker	Non-smoker	Chi-square	P-value
	N (%)	N (%)		
Gender			99.635	<0.001
Male	109 (59.20)	75 (40.80)		
Female	13 (8.00)	150 (92.00)		
Total	122 (35.20)	225 (64.80)		
Ethnicity			8.401	0.015
Burma	86 (36.30)	151 (63.70)		
Mon	33 (40.20)	49 (59.80)		
Other	3 (10.70)	25 (89.30)		
Total	122 (35.20)	225 (64.80)		

Table 3 Knowledge and attitude comparison between non-smoker and current smoker. (smoking behaviour) (n=347)

Variable	N	Median score	Mean Rank	Mann-Whitney U test	P-value
Knowledge				12604.50	0.207
Current smoker	122	12	183.18		
Non-smoker	225	12	169.02		
Attitude				11020.50	0.002
Current smoker	122	38	151.83		
Non-smoker	225	40	186.02		

Table 4 Association between reinforcing factors and cigarette smoking behaviour (n=347)

Reinforcing factor	Current Smoker	Non-smoker	Chi-square	P-value
	N (%)	N (%)		
Father smokes cigarettes			13.021	<0.001
Yes	86 (43.40)	112 (56.60)		
No	36 (24.20)	113 (75.80)		
Mother smokes cigarettes			5.976	0.015
Yes	37 (47.40)	41 (52.60)		
No	85 (31.60)	184 (68.40)		
Designate smoke-free home			27.362	<0.001
Yes	56 (25.00)	168 (75.00)		
No	66 (53.70)	57 (46.30)		
Close friends smoke cigarettes			81.197	<0.001
Yes	115 (53.50)	100 (46.50)		
No	7 (5.30)	125 (94.70)		
Number of close friend smokers			99.681	<0.001
1 - 4	31 (36.90)	53 (63.10)		
5 - 8	44 (62.90)	26 (37.10)		
9 -12	19 (57.60)	14 (42.40)		

Table 4 Association between reinforcing factors and cigarette smoking behaviour (cont.)

Reinforcing factor	Current Smoker	Non-smoker	Chi-square	P-value
	N (%)	N (%)		
≥13	21 (72.40)	8 (27.60)	8.047	0.005
No close friend smoker	7 (5.30)	124 (94.70)		
Employer smokes cigarette				
Yes	61 (44.50)	76 (55.50)	6.868	0.009
No and not know	61 (29.00)	149 (71.00)		
Designate smoke-free work place				
Yes	92 (31.90)	196 (68.10)		
No	30 (50.80)	29 (49.20)		

Table 5 Association between accessibility of cigarette and smoking behaviour among current smokers (n=122)

Variable	N	Median	Mean Rank	Mann-Whitney U test	P-value
Monthly Expenditure for cigarettes (Thai baht)				212.50	<0.001
Daily smoker	94	300	73.24		
Often smoker and					
Occasional smoker	28	90	22.09		

DISCUSSION: This study was carried out with an expectation that the new knowledge body can be used upon the interventions toward behavioural change in order to establish prevention and control measures for cigarette smoking among Myanmar migrant workers in Thailand. The overall prevalence of current smoking among adult Myanmar migrant workers was 35.2% with 59.2% prevalence among males and 8.0% among females. Adult smoking was quite high. In this present study, gender and ethnicity highly associated with cigarette smoking behaviour. Male cigarette smoking was more common than female one. Women cigarette smoking is blemish due to social restriction. Ethnicity related with cigarette smoking behaviour. Mon migrant smoked more than other ethnic groups. There has been a long-practiced habit of providing cheroots or cigarettes to guests at wedding and donation ceremonies⁸). This habit is more common in rural area than in urban area of Myanmar. While 49.0% of the respondents possessed moderate knowledge about cigarette smoking and its harmful health consequences, there was no relationship between knowledge and cigarette smoking behaviour. On the other hand, the respondents who had high score about positive and negative statements of attitude questions seemed to be those non-

smokers. Improving knowledge will be less effective if there was no environmental support, community participation and policy support. There was a relationship between the smoking of the parents and cigarette smoking behaviour. Most of the respondents had close friend smokers. The more the respondents had close friend smokers, the more chances for the respondents to become cigarette smokers. This study revealed that the respondents who had an employer, who smokes cigarette with no smoke-free workplace, would be oriented toward cigarette smoking. Daily smokers had more expenditure for cigarette purchase than often and occasional smokers. This result suggested that smoke-free workplace and living quarter for environmental support intervention and awareness-building should be implemented for Myanmar migrant workers to change their behaviour and to complete the linkage of knowledge, attitude and practice (KAP). The acquainted people, who highly influence on smoking of the respondents, should be informed about smoking hazard and their being the source of smoking.

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