

Predictors of Smoking and Quitting Behaviours Among Malaysian Adult Smokers

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Introduction

- **Worldwide tobacco-related deaths were expected to increase to 10 million every year by 2020.**
- **Smoking prevalence among Malaysian adults currently stood at 24.8 %.**
- **Based on these figures, at least 10,000 deaths each year or 27 a day in this country are due to smoking.**
- **Studying smoking behaviour is important to develop effective tobacco control policies and measures particularly to develop effective cessation programme.**

Objectives

- To identify **demographic, socioeconomic and product-related factors** associated with different smoking and quitting behaviours.
- To report heaviness of smoking, perception of addiction, quitting intention and quitting attempts among Malaysian adult smokers.

Methodology

- **This descriptive study reports cross-sectional data from the Wave 1 (year 2005) of the International Tobacco Control Policy Survey –Malaysian cohort.**
- **Sample were selected from 6 states by randomized sampling methods using multistage clustering technique.**
- **2006 adult smokers were surveyed by face to face household's interview using standardised questionnaire.**
- **Chi-square and binary logistic statistics for univariate analysis were used to test association between groups.**
- **Odd ratios and 95% confidence interval were computed for each predictor available.**

Results

HEAVINESS AND PERCEPTION OF ADDICTION

- About 5.6% of smokers are heavy smokers (>20 cig/day) while the rest are light to moderate smokers (94.4%). (Table 1)
- Buddhists (OR=1.85), elderly (OR= 4.92) and those who smoke flavoured cigarettes (OR=1.79) were higher in their heaviness of smoking. (Table 2 and 4)
- Majority of smokers have perception that they are addicted (25.1%) or somewhat addicted (55.6%) compared to those saying that they are not addicted (19.2%). (Table 1)
- Non-professionals (OR= 1.89), urban resident (OR= 1.43) and those who smoke regular (non-flavoured) (OR= 1.61) and non hand-rolled cigarettes (OR= 1.90) were more likely to consider themselves addicted compared to their counterpart groups. (Table 2, 3 and 4)

Table 1: Distribution of Malaysian adult smoker according to cigarette per day and perception of addiction to nicotine

Variable	Frequency	%
Cigarettes per day (Heaviness)		
1-10 (Light)	939	48.4
11-20 (Moderate)	892	46.0
>20 (Heavy)	109	5.6
Total	1940	100.0
Addiction^a		
Not at all addicted	376	19.2
Somewhat addicted	1087	55.6
Very addicted	491	25.1
Total	1954	100.0

5.6% of smokers are heavy smokers while the rest are light to moderate smokers

Majority of smokers have perception that they are addicted or somewhat addicted compared to those saying that they are not addicted

^a based on smoker's perception

Table 2: Demographic characteristics as predictors of heaviness and addiction

Variable	Heaviness		Addiction ^a	
	OR	P value	OR	P value
Gender *		0.203		0.848
Male	1.00		1.00	
Female	0.40		0.95	
Age group **		<0.001		0.700
18-24	1.00		1.00	
25-39	2.15	0.094	0.82	0.255
40-54	3.32	0.007	1.07	0.704
55+	4.92	<0.001	0.74	0.112
Race **		0.187		0.145
Malay	1.00		1.00	
Chinese	1.64	0.063	0.75	0.085
Indian	1.03	0.947	0.70	0.113
Other	0.78	0.433	1.04	0.803

The elderly were nearly 5 times higher in their heaviness compared to those aged 18-24 years old.

* Chi-square

** Binary logistic

^a based on smoker's perception

Table 2: Demographic characteristics as predictors of heaviness and addiction (cont.....)

Variable	Heaviness		Addiction ^a	
	OR	P value	OR	P value
Locality*		0.715		0.001
Rural	1.00		1.00	
Urban	1.08		1.43	
Religion *		0.171		0.054
Islam	1.00		1.00	
Christianity	1.39	0.348	1.60	0.053
Hinduism	0.86	0.776	0.73	0.198
Buddhism	1.90	0.017	0.74	0.075
Others	1.07	0.927	1.12	0.793

Those who were from urban area have positive perception towards addiction.

Buddhist were higher in their heaviness of smoking compared to the Muslims

* Chi-square ** Binary logistic ^a based on smoker's perception

Table 3: Socioeconomic characteristics as predictors of heaviness and addiction

Variable	Heaviness		Addiction ^a	
	OR	P value	OR	P value
Occupation*		0.103		<0.001
Professional	1.00		1.00	
Non professional	2.32		1.89	
Employment status*		0.634		0.811
Employed	1.00		1.00	
Unemployed	1.11		0.97	
Annual household income *		0.397		0.652
> RM 10,000	1.00		1.00	
≤ RM 10,000	0.84		0.95	
Education **		0.289		0.385
Primary	1.00		1.00	
Secondary	1.10	0.678	1.12	0.382
Tertiary	0.61	0.224	0.91	0.603

Non-professionals are more likely to consider themselves as addicted.

There is no significant association between employment status, income or education with heaviness and addiction

* Chi-square ** Binary logistic ^a based on smoker's perception

Table 4: Product characteristics as predictors of heaviness and addiction

Variable	Heaviness		Addiction ^a	
	OR	P value	OR	P value
Cigarette Type* Hand-rolled Not Hand-rolled	1.00 2.6	0.064	1.00 1.90	<0.001
Brand is light* Regular (not light) Light	1.00 0.65	0.083	1.00 0.94	0.621
Flavour of brand* Flavoured Regular (non-flavoured)	1.00 0.56	0.008	1.00 1.61	<0.001

Those who smoke non hand-rolled cigarettes were more likely to say that they are addicted.

Those who smoke regular brand are less heavy smokers but they are more likely to say that they are addicted.

* Chi-square

^a based on smoker's perception

Results

QUITTING ATTEMPTS AND QUTTING INTENTION

- More than half of smokers (61.3%) have tried to quit. (Table 5)
- During the time of the study, there is still about 45% of smokers do not have plan to quit smoking. (Table 5)
- Females (OR= 0.65), Chinese (OR= 0.68), Buddhists (OR= 0.60), urban resident (OR= 0.75) and those who smoke light cigarettes (OR= 0.78) were less likely to have previous quitting attempts. (Table 6 and 8)
- Females, Buddhists, urban resident and those who smoke light cigarettes were less likely to have both quitting attempts and quitting intention. (Table 6 and 8)

Table 5: Distribution of Malaysian adult smoker according to Quitting attempt and Quitting intention

Variable	Frequency	%
Quitting attempt		
Yes	1228	61.3
No	774	38.7
Total	2002	100.0
Quitting intention		
In next month	105	5.3
In next 6 months	119	6.0
Beyond 6 months	858	43.6
Not planning to quit	886	45.0
Total	1968	100.0

More than half of smokers have tried to quit smoking.

During the time of the study, there is still about 45% of smokers do not have plan to quit smoking.

Table 6: Demographic characteristics as predictors of quitting attempt and quitting intention

Variable	Quitting attempt		Quitting intention	
	OR	P value	OR	P value
Gender *		0.049		0.041
Male	1.00		1.00	
Female	0.65		0.63	
Age group**		0.700		0.069
18-24	1.00		1.00	
25-39	0.89	0.463	1.08	0.606
40-54	1.04	0.792	1.10	0.500
55+	0.94	0.636	0.80	0.142
Race **		0.025		0.006
Malay	1.00		1.00	
Chinese	0.68	0.005	0.65	0.002
Indian	1.10	0.659	1.37	0.136
Others	1.08	0.552	0.94	0.643

Females are less likely to have quitting attempt and quitting intention.

Chinese were lower in doing quitting attempt compared to the Malays.

* Chi-square

** Binary logistic

Table 6: Demographic characteristics as predictors of quitting attempt and quitting intention (Cont....)

Variable	Quitting attempt		Quitting intention	
	OR	P value	OR	P value
Locality *		0.002		<0.001
Rural	1.00		1.00	
Urban	0.75		0.51	
Religion **		0.003		<0.001
Islam	1.00		1.00	
Christianity	0.83	0.281	0.67	0.022
Hinduism	1.14	0.591	1.73	0.024
Buddhism	0.60	<0.001	0.60	0.001
Others	0.55	0.076	0.58	0.104

Urban resident were less likely to have quitting attempt and quitting intention.

Compared to the Muslims, Buddhists were lower in quitting attempts and intention while Hindus are more likely to have quitting intention.

* Chi-square

** Binary logistic

Table 7 : Socioeconomic characteristics as predictors of quitting attempt and quitting intention

Variable	Quitting attempt		Quitting intention	
	OR	P value	OR	P value
Occupation*		0.313		0.720
Professional	1.00		1.00	
Non professional	1.18		1.06	
Employment status*		0.762		0.053
Employed	1.00		1.00	
Unemployed	1.03		0.82	
Annual household income*		0.976		0.465
> RM 10,000	1.00		1.00	
<= RM 10,000	1.003		1.07	
Education**		0.841		0.894
Primary	1.00		1.00	
Secondary	0.96	0.722	0.99	0.946
Tertiary	1.04	0.809	0.93	0.657

There is no significant association between these four selected socioeconomic characteristics with quitting attempt and quitting intention.

Table 8: Product characteristics as predictors of quitting attempt and quitting intention

Variable	Quitting attempt		Quitting intention	
	OR	P value	OR	P value
Cigarette Type *		0.730		0.897
Not hand-rolled	1.00		1.00	
Hand-rolled	1.06		0.98	
Brand is light *		0.023		0.027
Regular (not light)	1.00		1.00	
Light	0.78		0.79	
Flavor of brand *		0.381		0.395
Flavoured	1.00		1.00	
Regular (non-flavoured)	0.91		0.91	

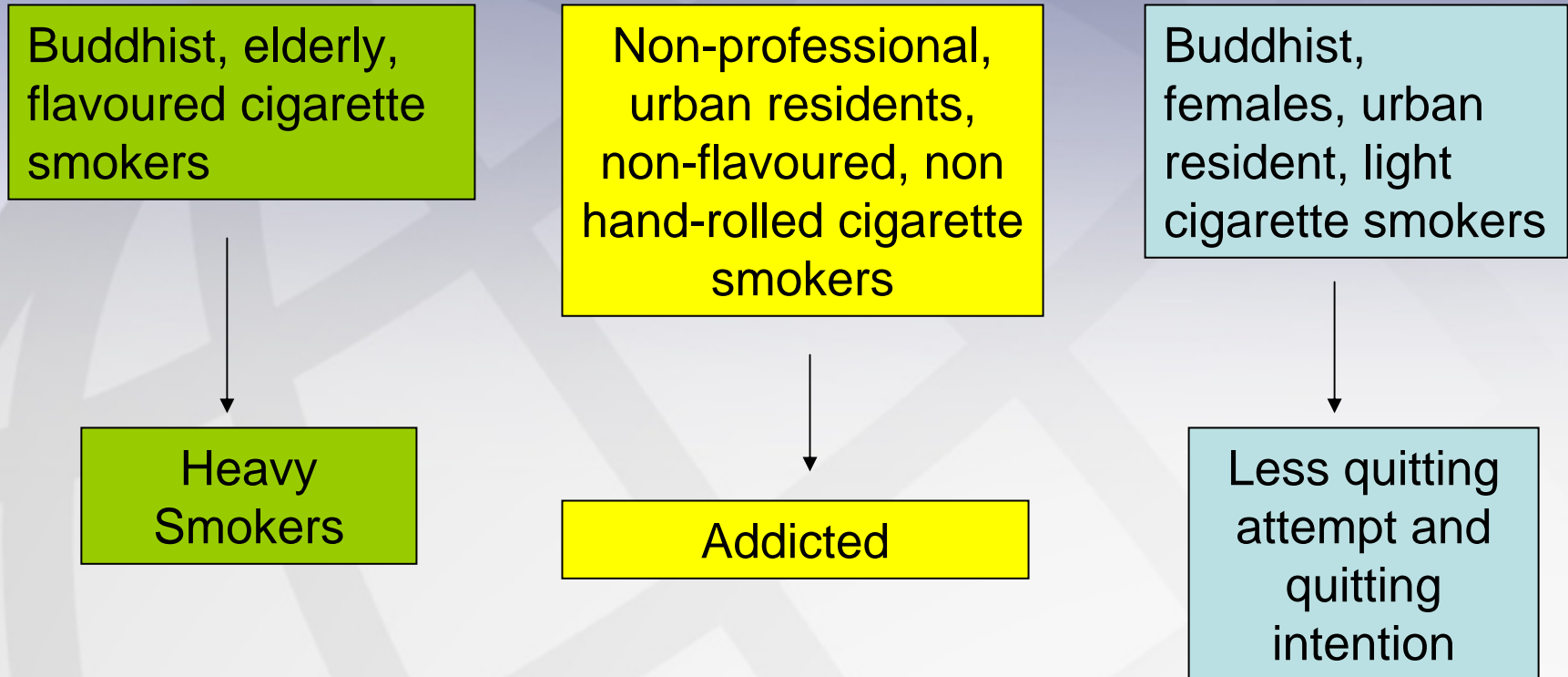
Those who smoke light cigarettes were less likely to have quitting attempts and quitting intention.

* Chi-square

Conclusion

- **This study have identified important factors and characteristics related to the Malaysian smoking and quitting behaviours.**
- **Buddhist, elderly, flavoured cigarette smokers are higher in their heaviness.**
- **Non-professional, urban resident and those who smoke non-flavoured and non hand-rolled cigarettes were more likely to consider themselves addicted to smoking.**
- **Females, Buddhists, urban resident and those who smoke light cigarettes were less likely to have both quitting attempts and quitting intention.**

Summary



Demographic: Buddhist, females, elderly, urban residents

Product: Flavoured, non-flavoured, non-hand rolled, light cigarette

Socioeconomic: Non-professionals

References

- Judith Mackay, Michael Eriksen, Omar Shafey. Tobacco Atlas 2nd Ed. American Cancer Society; 2006
- Tobacco Control in Malaysia: A Long Winding Road; Clearinghouse for Tobacco Control, national Poison Centre; 2005
- WHO tobacco control country profile. Available at <http://www.who.int/tobacco/media/en/Malaysia.pdf> (accessed May 23, 2007)
- Malaysia Tobacco Control Policies. Available at http://www.roswelltturc.org/globalpolicies_Malay.htm (accessed May 23, 2007)

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