



## The Perception towards National Anti-Smoking Initiatives among Malay Male Smokers

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### Abstract

**Background:** Global Adult Tobacco Survey (GATS), Malaysia 2011 reported that the prevalence of smoking was highest among Malays male i.e., 24.6% (CI:22.1,27.3). The aim of this study was to evaluate the perception of a group of smokers towards various national anti-smoking initiatives as well as its association with age and education level.

**Methods:** The study was conducted in a randomly selected pre-dominantly Malay settlement in Malaysia using a validated self-administered questionnaire. The national anti-smoking initiatives assessed were 'anti-smoking campaign', 'labelling on cigarette pack', 'increment of cigarette price', 'smoke free zone policies' and 'Quit smoking clinic' initiatives.

**Results:** A total of 136 Malay male smokers participated in this study. The percentage of respondents agreeing with the questions asked were very low, ranging from only 5.9% to 24.3%, except for one i.e., 99.3% agreed that the information on cigarette packs can be trusted. Assessing the success of various types of national anti-smoking initiatives in helping smokers to quit, the percentage of those who agreed ranged between 17.6% - 24.3% and in helping to reduce numbers of cigarette smoked, the range was from 12.5% to 18.4%. There was a significant association between 'increment of cigarette price' initiative with level of education ( $P=0.02$ ).

**Conclusion:** The percentage of positive perceptions towards all anti-smoking efforts was low and perception towards 'increment of cigarette price' was associated with level of education.

**Keywords:** Perception, Anti-smoking initiatives, Malaysia

### Introduction

Cigarette smoking has always been a major health issue and the diseases related to it remains among the top causes of mortality and morbidity globally (1-3). In the recent 2010-2011 Global Adult Tobacco Survey (GATS) Malaysia, it was reported that the percentage distribution of current smokers among Malaysians aged 15 years or older was 23.1%. It appears to highlight that the smoking problem is more pronounced among Malay men.<sup>4</sup> The Malaysian government has carried out multi-

pronged national anti-smoking initiatives to try to contain the increasing smoking prevalence and its adverse health effects. Among current national anti-smoking initiatives are anti-smoking campaign, legislative requirement of warning labels on cigarette packs, increased taxation for tobacco products to increase the price of cigarettes sold, legislation regarding and enforcement of smoke free zone policies and smoking cessation services such as 'Quit smoking clinic'(4).

In general, the results of these anti-smoking initiatives were favorable. The analysis of the National Health and Morbidity Surveys (NHMS) 2006 showed that there was a 3% drop in smoking prevalence compared to a decade prior to it. However, the drop was small compared to the achievement in other countries which ranges between 9 to 25 % (5,6).

In this study, the focus is on the perception among Malay male smokers towards various national anti-smoking initiatives. Smokers' perception needs to be understood as it influences behavior change (7-9). Thus, this exploration of perceptions towards various types of national anti-smoking initiatives could provide important feedback for the planning of future initiatives.

## Materials and Methods

It is a cross-sectional study carried out in June 2013 among Malay male smokers aged 20 years and above, in a predominantly Malay settlement in Negeri Sembilan. Data was collected using a validated self-administered questionnaire consisting of 20 questions assessing five types of national anti-smoking initiatives i.e., 'anti-smoking campaign', 'labelling on cigarette pack', 'increment of cigarette price', 'smoke free zone policy' and 'Quit smoking clinic'. The rating system used was a 5-point Likert's scale ranging from 1 (totally disagree) to 5 (totally agree).

Data were analyzed using IBM SPSS 21.0 software. The responses to individual questions were divided into 2 categories (i.e. scale 4 and 5 as 'agree' and scale 1, 2 and 3 as 'disagree'), and descriptive analysis was carried out to determine the distribution of frequencies and percentages. The total perception score was achieved by adding the individual question ratings and ANOVA test was performed to determine associations of each type of national anti-smoking initiatives with age groups and level of education.

## Results

A total of 136 Malay male smokers agreed to participate. Table 1 shows the distribution of respondents according to age group and level of

education. Majority of respondents were aged between 51 to 60 years old and had formal education only up to high school. Table 2 shows the frequencies and percentages of respondents' perception according to their responses to each question asked. Overall the percentages agreeing with these questions were very low, ranging between 5.9% to 24.3%, except for one question assessing perception towards 'labelling on cigarette pack' initiative where 99.3% of the respondents agreed that the 'information can be trusted'.

**Table 1:** Respondent's characteristics (n=136)

Variables	n	(%)
<b>Age group</b>		
≤30	33	(24.3)
31-40	8	(5.9)
41-50	14	(10.3)
51-60	64	(47.1)
≥61	17	(12.5)
<b>Education level</b>		
No formal education	8	(5.9)
Primary school	47	(34.6)
High school	71	(52.2)
University/College	10	(7.4)

The lowest percentages were for questions assessing perception towards 'smoke free zone policy' initiative. Only 5.9% agreed that it 'reduces harm to the second hand smoker', 9.6% agreed that the initiative helps 'smokers to refrain from breaking the law' and only 10.3% agreed it 'increase the awareness of the harmfulness of smoking'.

The responses to questions asked to assess perception on the success of various type of national anti-smoking initiatives to 'help smoker to quit smoking', was highest for 'labelling on cigarette pack', followed by 'increment of cigarette price', 'anti-smoking campaign' and 'Quit smoking clinic' i.e., 24.3%, 21.3%, 19.9% and 17.6%, respectively. The sequence was found to be similar for the questions asked to assess perception on the success of various type of national anti-smoking initiatives to 'help reduce the number of cigarette smoke' i.e. highest for 'labelling on cigarette pack', followed by 'increment of cigarette price', 'anti-smoking campaign' and 'Quit smoking clinic' (18.4%, 16.9%, 15.4% and 12.5% respectively).

**Table 2:** The number and percentage of respondents according to the respond category to the individual questions assessed (N =136)

Type of anti-smoking initiative and statement assessed	Agree f(%)	Disagree F (%)
<i>Anti-smoking campaign</i>		
1. Increase awareness of the danger of smoking	25(18.4)	111(81.6)
2. Increases smoker's concern regarding their health	24(17.6)	112(82.4)
3. Cuts off the mind set to start smoking	18(13.2)	118(86.8)
4. Help smoker to quit smoking	27(19.9)	109(80.1)
5. Help reduced the number of cigarette smoked	21(15.4)	115(84.6)
<i>Labelling on cigarette pack</i>		
1. Information can easily be understood	12(8.8)	124(91.2)
2. Information can be trusted	135(99.3)	1(0.7)
3. Increase awareness of the danger of smoking	16(11.8)	120(88.2)
4. Increases smoker's concern regarding their health	16(11.8)	120(88.2)
5. Cuts off the mind set to start smoking	24(17.6)	112(82.4)
6. Help smoker to quit smoking	33(24.3)	103(75.7)
7. Help reduced no of cigarettes smoked	25(18.4)	111(81.6)
<i>Increment of cigarette price</i>		
1. Help smoker to quit smoking	29(21.3)	107(78.7)
2. Help reduced the number of cigarette smoked	23(16.9)	113(83.1)
3. Stop the initiative to starts smoking	23(16.9)	113(83.1)
<i>Smoke free zone policy</i>		
1. Reduces harm to the second hand smokers	8(5.9)	128(94.1)
2. Smoker refrain from breaking the law	13(9.6)	123(90.4)
3. Increase awareness of the danger of smoking	14(10.3)	122(89.7)
<i>Quit smoking clinic</i>		
1. Helps smoker to quit smoking	24(17.6)	112(82.4)
2. Help reduced the number of cigarette smoked	17(12.5)	119(87.5)

**Table 3:** The association of total score perception according to type of anti-smoking initiative according to age group

Type of initiative	Mean	±SD	95% CI		Pvalue <sup>a</sup>
<i>Anti-smoking campaign</i>					
≤30 years old	23.12	±3.41	21.91	24.33	0.59
31-40 years old	23.25	±6.61	17.73	28.77	
41-50 years old	23.43	±3.67	21.31	25.55	
51-60 years old	22.48	±4.63	21.33	23.64	
≥61 years old	21.12	±6.03	18.02	24.22	
Total	22.61	±4.59	21.83	23.39	
<i>Labelling on cigarette pack</i>					
≤30 years old	10.15	±3.06	9.07	11.24	0.79
31-40 years old	10.13	±3.31	7.35	12.90	
41-50 years old	10.79	±2.42	9.39	12.19	
51-60 years old	10.36	±2.60	9.71	11.01	
≥61 years old	9.53	±3.71	7.62	11.44	
Total	10.24	±2.87	9.75	10.72	
<i>Increment of cigarette price</i>					
≤30 years old	7.33	±2.01	6.62	8.05	0.34
31-40 years old	7.88	±2.17	6.06	9.69	
41-50 years old	7.43	±1.83	6.37	8.48	
51-60 years old	6.91	±1.82	6.45	7.36	
≥61 years old	6.47	±2.21	5.33	7.61	
Total	7.07	±1.94	6.74	7.40	
<i>Smoke free zone policy</i>					
≤30 years old	11.15	±2.36	10.31	11.99	0.63
31-40 years old	12.13	±2.95	9.66	14.59	
41-50 years old	10.79	±2.05	9.61	11.97	
51-60 years old	11.48	±2.25	10.92	12.05	
≥61 years old	10.82	±3.43	9.06	12.59	
Total	11.29	±2.46	10.87	11.70	
<i>Quit smoking clinic</i>					
≤30 years old	11.15	±2.36	17.48	20.64	0.23
31-40 years old	12.13	±2.95	11.24	19.76	
41-50 years old	10.79	±2.05	15.24	19.90	
51-60 years old	11.48	±2.25	17.02	19.04	
≥61 years old	10.82	±3.43	13.07	20.11	
Total	11.29	±2.46	17.11	18.70	

<sup>a</sup> ANOVA \*significant at  $P < 0.05$

However, the response to questions asked to assess perception on the success of various types of national anti-smoking initiatives to 'increase awareness of danger of smoking' was highest for 'anti-smoking campaign' followed by 'labelling on cigarette pack' and 'smoke free zone policy' i.e., 18.4%, 11.8% and 10.3%, respectively.

Table 3 shows that there was no association of total perception score of all types of anti-smoking initiative with age group. However, Table 4 shows that there was a significant association of 'increment of cigarette price' initiative with level of education ( $P=0.02$ ).

**Table 4:** The association of total score perception according to type of anti-smoking initiative according to level of education

Type of initiative	Mean	±SD	95% CI		Pvalue <sup>a</sup>
<b>Anti-smoking campaign</b>					
No formal education	20.13	±7.57	13.80	26.45	0.36
Primary school	22.38	±4.34	21.11	23.66	
High school	23.08	±4.40	22.04	24.13	
University/College	22.30	±4.11	19.36	25.24	
Total	22.61	±4.59	21.83	23.39	
<b>Labelling on cigarette pack</b>					
No formal education	9.13	±4.05	5.74	12.51	0.68
Primary school	10.21	±2.88	9.37	11.06	
High school	10.31	±2.78	9.65	10.97	
University/College	10.70	±2.71	8.76	12.64	
Total	10.24	±2.87	9.75	10.72	
<b>Increment of cigarette price</b>					
No formal education	5.38	±2.97	2.89	7.86	0.02*
Primary school	6.74	±1.93	6.18	7.31	
High school	7.44	±1.71	7.03	7.84	
University/College	7.30	±2.00	5.87	8.73	
Total	7.07	±1.94	6.74	7.40	
<b>Smoke free zone policy</b>					
No formal education	11.13	±3.27	8.39	13.86	0.52
Primary school	10.89	±2.62	10.12	11.66	
High school	11.48	±2.26	10.94	12.01	
University/College	11.90	±2.47	10.13	13.67	
Total	11.29	±2.46	10.87	11.70	
<b>Quit smoking clinic</b>					
No formal education	15.00	±6.66	9.44	20.56	0.25
Primary school	17.64	±4.84	16.22	19.06	
High school	18.41	±4.27	17.40	19.42	
University/College	17.90	±4.61	14.61	21.19	
Total	17.90	±4.67	17.11	18.70	

<sup>a</sup> ANOVA \*significant at  $P < 0.05$

## Discussion

Malay male smokers were chosen as the study population because they were reported to be the highest percentage of current smokers in Malaysia (4). The result shows that 'labelling on cigarette pack' initiative was chosen to be the most helpful initiative in helping this group of smokers to quit

smoking and reduce the number of cigarette that they smoke. The perception towards 'labelling on cigarette packs' might be linked with noticeability. A study among 1919 male smokers in Malaysia showed that 75% of them had noticed or looked closely at the labels (10). However; it is quite worrying that despite the high percentage of trust towards the content of cigarette packs labelling

(99.3%), the percentage who agreed that the information can easily be understood was only 8.8%. This could indicate that the content and presentation of messages on cigarette packs was not appropriate of this group of smokers. Interestingly GATS Malaysia 2011 survey reported that the display of health warning on cigarette packs was more noticeable among those with a higher level of education. However, in this study no association was observed between perception toward 'labelling on cigarette packs' and levels of education. Perhaps, this could be due to the different study population i.e., the study population in GATS were from general population while this study population was confined to Malay male smokers.

The second anti-smoking initiative, which helped smokers to quit smoking and reduce the number of cigarette that they smoke, was the 'increment of cigarette price' initiative. One study done using published time series data on cigarette excise tax, cigarette price, per capita income and tobacco control measures from 1990-2004 showed that tobacco taxation is an effective method in reducing cigarette consumption, i.e. a 10% increase in cigarette price will effect a reduction of 3.8% in cigarette consumption (11). GATS Malaysia 2011 reported that a current smoker spent an average of RM 178.80 per month on manufactured cigarettes and 6.8% of them sometimes did not have enough money for food due to it having been spent on cigarettes. The GATS survey also showed that cigarette price has a strong association in influencing the cessation of smoking habit, especially among non-earning teenagers and those from the lower income group. These are important facts. Although the current study didn't analyse respondents' income, but the respondents' level of education can be indirectly linked level of income (i.e., higher the education level indicating higher income). In this study, there was a significant association between positive perception of 'increment of cigarette price' initiatives with level of education and majority of the respondent in this group has low education level (i.e., formal education only up to high school).

Only 18.4% of the respondents agree that 'anti-smoking campaign' is successful to 'increase

awareness of danger of smoking' and those who agreed that it 'increases smoker's concern regarding their health' is even lower (i.e. only 17.6%). These low percentages could be due to its insufficient planning or inadequate publishing of its positive impact assessment. In America, the evaluation of their national mass media smoking cessation campaign found that 62% among the respondents showed confirmed awareness toward the branded anti-smoking campaign, while 79% reported aided awareness and evaluation of effectiveness concluded that it was successful in reducing prevalence (12, 13). In Canada, a study reported that anti-smoking advertisement was most effective in reducing smoking prevalence among adolescents and it was estimated to convey 79% efficacious message and only 4% unclear message (14). These findings were better than the findings in this study and these differences could be due to the different population studied i.e. this study was carried out among only smokers while the other study was among the general population, thus the positive perception among smokers towards anti-smoking efforts might be much reduced as compared to the general public.

The percentages agreeing to the questions asked regarding perception towards 'smoke free zone policy' initiative were among the lowest. Despite having 'smoke free zone policy' legislations in Malaysia, its enforcement to protect member of the public from second hand smoking is not seen as effective among the respondents. Only 5.9% of them agreed that the policy 'reduces harm to second hand smokers' and only 9.6 % agree that it refrained smokers from smoking in the gazetted premises. This might reflect the lack of obedience of smokers, inefficient coverage of enforcement or lack of other supporting elements that could enhance the success of 'smoke free zone policy' such as no smoking signage at the gazetted settings (15-19).

The percentage who agreed to the questions asked regarding perception towards 'Quit smoking clinic' is also low among this group of smokers. Only 17.6% agree it helped them to quit smoking and 12.5% to reduce the number of cigarettes. These findings are not encouraging as compared to quit



smoking services in other countries. The 'Smoke line' program carried out by the Health Education Board of Scotland reported that in one year 23.6% (CI:20.2,27.0) claimed that they had stopped smoking and 88.0% (CI:85.4,90.6) claimed they have made some changes. It also reported that the program had reached a high number and was associated with a highly acceptable quit rate among adults, thus it had contributed considerably to an accelerated decline in smoking prevalence in Scotland (20). This could indicate that the 'Quit smoking clinic' strategies and service delivery need to be further improved.

## Conclusion

In general, the perception among this group of Malay male smokers towards various national anti-smoking initiatives is poor and did not influence their smoking cessation behaviors. Perception is important in predicting behavior change. The perception towards anti-smoking efforts should be positively strong especially among smokers, so that there will be a high possibility of them adopting and benefiting from it. Thus, based on this research finding, there is a need to review and improve future current anti-smoking efforts especially focusing on this high risk group to further improve the impact and effectiveness.

## Ethical consideration

This study was approved by Universiti Putra Malaysia's Ethics Committee for Research Involving Human Subjects. Written informed consent was obtained from each respondent and confidentiality has been assured to best of capability. Ethical issues (Including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

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