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PUBLIC INPUTS AND BEHAVIOUR ON SMOKE-FREE INITIATIVES IN MALAYSIA

Mastura Johar[1+]
Manimaran Krishnan Kaundan[2]
Samsudin A. Rahim[3]
Nur Faezah Hamzah[4]
Hana Marlin Mahfodz[5]
Baharudin Omar[6]
Chang Peng Kee[7]

[1]*Malaysian Health Promotion Board (MySihat) Cyberjaya, Malaysia; Universiti Tenaga Nasional Malaysia*
[2,3,4,5,6]*Universiti Tenaga Nasional Malaysia*
[7]*Universiti Kebangsaan Malaysia*


(+ Mastura Johar)

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ABSTRACT

Based on the Malaysian National Health and Morbidity Survey 2015, smoking-related diseases such as cancer and CVD, were the main causes of death. Following this, the Smoke-Free Programme (SFP) was initiated by MySihat through designating certain localities in whole or part of a city/town as "smoke-free" areas. Therefore, Malacca, Cameron Highland, Penang, Mulu, Kota Bharu, Kuala Terengganu and Johor Bahru were chosen. This cross-sectional study aims at determining the people's knowledge, attitude and practice towards the implementation of SFP policy, smoker's compliance and tolerance towards SFP policy, and gauging the anti-smoking services in the designated areas. A set of questionnaires developed by MySihat (Cronbach Alpha 0.701) were used. 2001 respondents were assigned from the five following states: Malacca, Penang, Johor, Kelantan and Terengganu. Male respondents were slightly higher than female (54.9% vs 45.1%). Majority of the respondents (79.1%) have heard about the government initiative to designate certain localities as smoke-free areas. Most of them had heard about smoke-free areas through Malaysian Ministry of Health, followed by local municipalities (45.8%), Ministry of Tourism (30.7%) and NGOs (25.3%). Majority of respondents (73.1%) received their information through signboards, television advertisement (68.9%), and the lowest was from magazines (40.3%). However, surprisingly 30% of respondents said that they could smoke in smoke-free designated areas. Most respondents (90.3%) agreed that the initiative on providing designated smoke-free areas help reduce the percentage of smokers among citizens. Almost all of respondents (96.8%) agreed that the SFP protect the non-smokers from the harmful effects of tobacco smoke. Most respondents are knowledgeable on the harmful effects of tobacco However there are still quite a number of smokers who are still nonchalant towards the policy.

Contribution/ Originality: This study is one of very few studies which have investigated and was initiated by Malaysian Health Promotion Board (MySihat) on implementation of "smoke-free" areas. This cross-sectional study via face to face approached investigated the people's knowledge, behavior and practice towards the implementation of SFP policy, and gauging the anti-smoking services in Malaysia.

1. INTRODUCTION

The use of tobacco is growing worldwide (1.3 billion consumers) and has increased significantly in low and middle income countries to 82% of the world's tobacco users (The ASEAN Tobacco Control Atlas, 2013). There are 121 million adult smokers and 20% of the population is from ASEAN countries. Of the 121 million adult smokers, Indonesia has the most number of adult smokers (50.6%) followed by the Philippines (14.2%), Vietnam (12.6%), Thailand (8.8%), Myanmar (7.3%) and Malaysia (3.9%) (ASEANTCA, 2013). In 2015, it is reported that, there are over 1.1 billion tobacco users among male and female with male users were more compared to women. Despite the prevalence of tobacco use worldwide, most countries show a decline in tobacco use but tobacco use in Eastern Mediterranean Region WHO, the African Territory (Global Health Observatory (GHO) Data, 2014) and China has increased. In addition, it is reported that the cigarette market to the Chinese is higher compared to the cigarette market volume in low-income and middle-income countries (World Lung Foundation, 2015). In Malaysia, 25% (4.4 million) of the total number of adults use tobacco products such as cigarettes, cigars, pipes, and shisha (IPH (Institute for Public Health), 2011). However, National Health Morbidity Survey (1996) and IPH (2006) reports showed that adult smokers aged 18 years and above decreased from 24.8% to 22.8% respectively. In 2011, 43.9% (4.7 million) Malaysian males smoked while less than 1% female (Global Adult Tobacco Survey (GATS) Malaysia, 2011).

Globally, there are 6 million deaths annually due to tobacco-related illnesses while 600,000 deaths are due to exposure to stale cigarette smoke (World Health Organization, 2015). Among the ASEAN countries, Indonesia recorded the highest death rate of 190,260 in a year followed by the Philippines (87,600) Myanmar (71,060) and Thailand (50,710) (Southeast Asia Tobacco Control Alliance, 2014). While in Malaysia, 10,000 deaths are reported annually. If the trend of smoking among the population is unchanged, it is expected that the number of deaths will increase to 30,000 by 2020 (Ministry of Health Malaysia, 2003). The World Health Organization (WHO) estimates that in 2008, tobacco had caused 1/10 (5 million) of worldwide adult mortality per year (WHO, 2013).

Therefore, due to public health concern, The Smoke-Free Program initiative has been implemented and is defined as the effort of 'creating a whole or partial city or city as a non-smoking area' (Smoke-Free Cities) to protect the public from the threat of exposure to passive cigarette smoke or 'Second Hand Smoke' (SHS). This move is becoming an increasingly popular approach worldwide in meeting the provisions of Article 8 of the Convention on Tobacco Control (WHO) Framework Convention on Tobacco Control, WHO signed by Malaysia in 2005. The WHO Tobacco Free Initiative mission is to reduce the burden of disease and death caused by tobacco, thus protecting the present and future generations of harmful health, social, environmental and economic impacts of tobacco use and exposure to cigarette smoke (WHO [Internet], 2013).

Therefore, this indicates the urgency of comprehensive and collaborative study and treatment of MySihat Cigarette Smoke Program. Findings from this study will provide important insights on the design of appropriate intervention programs for the prevention, management, and treatment of the Smoke-free Initiatives by MySihat Cigarette Smoke Program.

The objectives of this study are as below:-

i. To assess the effectiveness of the MySihat Cigarette Smoke Program.
ii. To determine the behavior and attitude regarding the implementation of the Smoke-free Cigarette Policy
iii. To determine the general knowledge and effect of tobacco/ cigarettes on secondary smokers in Malaysia.

2. MATERIALS AND METHODS

The research design used in this study is a quantitative, exploratory survey designs. This study applied a cross-sectional survey method using the questionnaire developed by MySihat. The questionnaire measures the acknowledgement on the law and the rights of the public regarding Cigarette Smoke-Free campaign and program. The survey questionnaire was administered to all respondents aged 15 years and above and was distributed and

divided into 5 States which include Melaka, Penang, Kelantan, Terengganu and Johor. Respondent was selected based on the following procedure. Every fifth person passing through the research station will be required to take part in the survey. This study uses the stratified random sampling and convenient sampling method which involves five (5) states at the BAR incinerator implementation location as follows:

i. Melaka
- Melaka Raya
- Jonker Street * (World Heritage Melaka City)
- Jalan Kota ** (Melaka Raya).
- Alor Gajah City Center
- Jasin City Center
- Melaka International Trade Center (MITC)

ii. Pulau Pinang
- George Town WHS
- Daerah Timur Laut
- Barat Daya, SPT, SPU & SPS

iii. Kelantan
- Kota Baharu

iv. Terengganu
- Pantai Batu Buruk

v. Johor
- Pusat Pentadbiran Nusajaya
- Iskandar Malaysia
- Muar

For the purpose of this study, a set of questionnaire surveys was developed. The questionnaire contains a selected structured and systematic scope of monitoring that conforms to the objective of the study to help produce an accurate, comprehensive and thorough study report. The reliability of the survey questionnaire was achieved when the pilot study was tested on respondents using SPSS. It reached the reliability of Cronbach's Alpha = 0.701 (acceptable reliability, George and Mallery (2003). The results suggest that assessment survey by MySihat can be used to determine and to evaluate, in a quantifiable fashion, the Smoke-free Initiatives by MySihat Cigarette Smoke Program in Malaysia. The descriptive data analyses described the respondents' profile, namely gender, age, race, level of education, designation, gross income and smoking status on the dependent variables, during the study. The first set of analyses examined the impact of the respondents' profiles through descriptive data analysis. The purposes of examining the data in detail were to detect errors in coding during data entry, to screen out any unusual values, to identify outliers, to assess the normality of distribution and homogeneity of variance of the population from which samples were drawn. The aim of this study is to examine subjects (N=2001) of age 15 years old and above. The results were tested on respondents using SPSS.

3. RESULTS

Two thousand and one respondents' (N=2001) have participated in this study from the five following states: Malacca, Penang, Johor, Kelantan and Terengganu. Male (54.9%) respondents were slightly higher than female (45.1%). Majority of the respondents were at the age range of 15-34 (52.5%) which include Malay (75.5%), Chinese (16.9%) and Indians (6.9%). In addition, (88.1%) of the respondents were from secondary and higher learning education background and (70.8%) are working and students (14.5%). The overall gross incomes (80.7%) of the

respondents were below RM2999 with (25.4%) smokes. Table 1 describe further on the socio-demographic data involved in this research.

Table-1. Socio-Demography Data

SOCIO-DEMOGRAPHIC		n	(%)
GENDER	Male	1098	54.9
	Female	903	45.1
AGE	15-24	564	28.2
	25-34	487	24.3
	35-44	337	16.8
	45-54	296	14.8
	55-64	210	10.5
	65+	107	5.3
RACE	Malay	1511	75.5
	Chinese	338	16.9
	Indian	139	6.9
	Ethnic Sabah	9	0.4
	Ethnic Sarawak	2	0.1
	Others	2	0.1
EDUCATION LEVEL	No schooling	26	1.3
	Lower	207	10.3
	Secondary	1151	57.5
	Higher Learning	613	30.6
	Others	4	0.2
DESIGNATION	Working/ Business	1416	70.8
	House wife	120	6.0
	Retirement	83	4.1
	Students	291	14.5
	Jobless	91	4.5
GROSS INCOME	≤ RM 999	751	37.3
	RM1000-1999	576	28.8
	RM2000-2999	292	14.6
	RM3000-3999	176	8.8
	RM40□0-4□99	80	4.0
	≥ RM5000	126	6.3
SMOKING STATUS	Yes	509	25.4
	No	1492	74.6

Table-2. Implementation of smoke-free initiative in Malaysia

		YES	NO
		%	%
O□erall	Have heard about the government initiative to designate □ertain localities as smoke-free ar□as	79.1	20.9
Agencies	Malaysian Ministry of Health/ MySihat	68.9	31.1
	Local municipalities	45.8	54.2
	Ministry of Tourism	30.7	69.3
	NGOs	25.3	74.7
Other medium	Signboards	73.1	26.9
	Television advertisement	68.9	31.1
	Poster	61.6	38.4
	News paper	58.9	41.1
	Magazines	40.3	59.7

According to Table 2, majority of the respondents (79.1%) have heard about the government initiative to designate certain localities as smoke-free areas. Most of them had heard about smoke-free areas through Malaysian Ministry of Health/ MySihat, followed by local municipalities (45.8%), Ministry of Tourism (30.7%) and NGOs

(25.3%). Majority of respondents (73.1%) received their information through signboards, television advertisement (68.9%), and the lowest was from magazines (40.3%). However, surprisingly 12.5% of respondents said that they could smoke in smoke-free designated areas. Most respondents (90.3%) agreed that the initiative to provide a designated smoke-free areas help reduce the percentage of smokers among citizens. Almost all of respondents (96.8%) agreed the SFP protects the non-smokers from the harmful effects of tobacco smoke. Most respondents are knowledgeable on the harmful effects of tobacco and have heard of the government policy and initiative. However, there are still quite a number of smokers who are still nonchalant towards the policy.

Table-3. General knowledge of tobacco / cigarettes

	Mean	Smoke (%)	Second-hand smoke (SHS) (%)
Knowledge of stale cigarette smoke	1.65	34.9	65.1

		Mean	YES (%)	NO (%)
Knowledge of hazard of cigarette smoke	Dangerous to self	1.96	96.1	3.9
	Dangerous to others	1.97	97.0	3.0
Overall		**1.97**		
Knowledge of smoking related illness	Lung cancer	1.97	96.9	3.1
	Diabetes	1.77	22.6	77.4
	Asthma	1.92	91.9	8.1
	Heart attack	1.92	92.1	7.9
	Diarrhea	1.92	7.7	92.3
	Stroke	1.72	72.3	27.7
	Gout	1.78	22.1	77.9
	Oral Cancer	1.93	93.4	6.6
	Dengue	1.96	3.6	96.4
	HIV/AIDS	1.83	16.9	83.1
Overall		**1.87**		

Table-4. Smoke-free Cigarette Policy

Variables	Mean	Strongly Agreed %	Agreed %	Not Agreed %	Strongly Not Agreed %
The smoke-free area initiative is to reduce smoking rates amongst the people of this country.	3.29	39.0	51.3	9.0	0.6
The non-smoking area initiative is to protect non-smokers from the dangers of cigarette smoke.	3.46	50.2	46.1	3.6	0.3
The non-smoking area initiative is to minimize the gazetted areas as smoking place.	2.65	10.1	31.5	41.8	16.6
Overall	**3.13**				

Table 3 explained the respondent general knowledge on the effect of tobacco / cigarettes. Respondents who smoke (34.9%) have knowledge on the effect of stale cigarette compared to second-hand smoke (65.1%). Over 97%

respondents are aware and knowledgeable about the hazard of cigarette smoke to self and to others and the related illness due to smoking.

Through this research, MySihat wishes to assess, in a quantifiable fashion, its level of respondent's agreement on smoke-free cigarette policy initiative. Table 4 describes the details of the smoke-free cigarette policy. The smoke-free area initiative is to reduce smoking rates amongst the people results to (90.3%) respondents agreed with the initiative. In addition, (96.3%) agreed on the dangers of cigarette smoke while (41.6%) agreed on the non-smoking area initiative to minimize the gazette areas as smoking place.

Table-5. Smoking behaviour in public areas

	Mean	**Almost Always**	**Always**	**Sometimes**	**Never**
		%	**%**	**%**	**%**
Smokes in Shopping Complex	3.63	4.5	3.5	16.7	75.2
Smoke-free designated areas	3.57	3.5	5.5	21.0	69.9
Smokes with family	3.42	7.5	6.3	22.6	63.6
Ever been compounded by smoking in the prohibited area.	3.89	0.6	0.8	6.7	91.9
Overall	**3.63**				

Table 5 describes the details on the smoking behavior in public areas. Smokes in Shopping Complex (8%), Smokes in Prohibited area (9%), Smokes with family around (13.8%) and been compounded by smoking in the prohibited area (0.14%). However, surprisingly 30% of respondents said that they could smoke in smoke-free designated areas. Most respondents (90.3%) agreed on the initiative to designate smoke-free areas were to reduce the percentage of smokers among citizens.

4. DISCUSSION

The survey questionnaire with the reliability of Cronbach's Alpha = 0.701 (acceptable) apply is an instrument developed by MySihat to address the question regarding the Smoke-free Cigarette Policy program initiative in Malaysia. The study reported more than (90.3%) respondents agreed on the initiative that designated smoke-free areas help reduce the percentage of smokers among citizens. Almost all of respondents (96.8%) agreed the SFP protects the non-smokers from the harmful effects of tobacco smoke. The results suggest that the male (54.9%) respondents were slightly higher than female (45.1%) and majority of the respondents were at the age range of 15-34 (52.5%). The majority respondents participated in this study were Malay (75%). Moreover, (88.1%) of the respondents were from secondary and higher learning education background and (70.8%) are working and students (14.5%). The overall gross incomes (80.7%) of the respondents were below RM2999 with (25.4%) smokes.

Majority of the respondents (79.1%) have heard about the government initiative to designate certain localities as smoke-free areas through Malaysian Ministry of Health/ MySihat, local municipalities, Ministry of Tourism and NGOs. Majority of respondents received their information through signboards, television advertisement and the lowest was from magazines. Besides being associated with poor health, disability and death from non-communicable diseases, tobacco smoking is also associated with increased risk of death due to infectious diseases (WHO, 2015). In this study 96% respondent aware of the related illness due to smoking. Additionally, respondents who smoke (34.9%) have knowledge on the effect of stale cigarette compared to second-hand smoke (65.1%). Over 97% respondents are aware and knowledgeable about the hazard of cigarette smoke to self and to others and the related illness due to smoking and various related illness regards of tobacco smoking.

5. CONCLUSION

Scientific facts show that there is no safe level of health on individuals who are exposed to SHS and have adverse effects on health on both adults and children (Yamato *et al.*, 2013). Smoking policy in the indoor environment is a step based on scientific evidence that is able to protect the health of the population from the dangers of SHS (Hyland *et al.*, 2008). All evidence suggests that the implementation of a completely non-smoking area is the most effective means of protecting public health from the dangers of exposure to SHS (WHO, 2007). In 2000, it was estimated that smoking rates for adult population over the age of thirty and above were 19% in industrialized countries and 9% in developing countries. Furthermore, it has been estimated that tobacco epidemics may kill one person in six adults, 10 million people a year for the next 20-30 years. Of these, it is estimated that 70-80% of deaths occur in developing countries (Ezzati and Lopez, 2003). In Malaysia, 10,000 deaths are reported annually and if the smoking trend among the population is unchanged, it is expected that the number of deaths will increase to 30 000 by 2020 (MHM, 2003). According to the IPH (2015) smoking-related illnesses such as cancer and cardiovascular disease are the main cause of early death in Malaysia for the last three decades.

To add, the Tobacco Control & FCTC Unit is working closely with Ministry of Health Education Division to implement appropriate health promotion activities to raise public awareness on the dangers of tobacco and non-smoking benefits. Among the activities, include the national 'No Smoking' campaign, the World No Tobacco Day celebration and the New Breathing Campaign. A collaborative effort organized by MySihat and SEATCA for the launch of "Towards a Smoke Free Malaysia" workshop has been implemented which, various seminar and workshop planning has been conducted for the Smoke-Free Spot Point and religious leaders in Penang (MHM, 2012).

5.1. Limitations

There are several limitations to the study. The main one concerns is sampling. Due to the dynamic population in this study, the investigators were unable to do probability sampling. However, every effort was made to collect data from different levels of the sample units, which included the owners or senior management, employees, clients and the general public.

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