

Smoking and Burden of Ill Health: A Review of the Malaysian Context

MY Lee¹, CL Tam^{2*}

¹ MBBS Student Jeffery Cheah School of Medicine and Health Sciences, Monash University Malaysia, Jalan Lagoon Selatan, 46150 Bandar Sunway, Selangor Darul Ehsan, Malaysia.

² Ph.D (Psychology), M.A (Counselling Psychology), BSc Hons (Mathematics), Jeffery Cheah School of Medicine and Health Sciences, Monash University Malaysia, Jalan Lagoon Selatan, 46150 Bandar Sunway, Selangor Darul Ehsan, Malaysia.

* **Corresponding Author:** Dr Cai-Lian Tam

Jeffery Cheah School of Medicine and Health Sciences, Monash University Malaysia, Jalan Lagoon Selatan, 46150 Bandar Sunway, Selangor Darul Ehsan, Malaysia.

Tel: (+603) 5514 6300 Extn 44974; Fax: (+603) 5514 6307

Email: tam.cai.lian@monash.edu

Abstract

Tobacco smoking is a growing pandemic and in Malaysia, with the current smoking epidemic; the prevalence of smoking in Malaysia is high and tobacco related morbidity and mortality in Malaysia is equally high. The relative effectiveness of the tobacco control programmes implemented in Malaysia is measured by the prevalence of tobacco consumption among the public. Incidentally, as the prevalence of smoking is rising among Malaysian youths, the health interventions on tobacco control are predominantly targeted to the younger population. However, studies have demonstrated the lack of effectiveness of the tobacco control programmes stated in this report among Malaysian youths. Despite the low rate of quit smoking among Malaysian youths, smoking cessation services worldwide has been shown to have favourable impacts on quitting behaviours among smokers. Therefore, indicating that success rate of quit smoking among Malaysian younger population can be improved by improvising the current standard of treatment of Quit Smoking Clinic. However, for smoking cessation to be effective on national level, multiple interventions are to be integrated to ensure a healthy population with reduced number of smokers.

Key words: Smoking; Malaysian context, Prevalence

Introduction

Every year, approximately six million deaths worldwide are attributed to tobacco use and exposure to second hand smoke¹. With the current patterns of tobacco consumption and intervention efforts, the Global Burden of Disease study projected that tobacco-attributable mortality would increase from 4.8 million in 2000 to 8.4 million in 2020.² In Malaysia, 1017 per 100,000 populations deaths was reported due to smoking-related illnesses, making it a

primary cause of death in Malaysia since the 1980s.² The greatest burden of ill health due to smoking are respiratory and cardiovascular diseases (CVD); CVD (1.69 million deaths), chronic obstructive pulmonary disease (COPD) (0.97 million deaths) and lung cancer (0.85 million deaths).²

A study was conducted to quantify the direct burden of smoking for CVD for all 38 countries in the World Health Organization (WHO) Western Pacific and South East Asian regions.³ The findings showed that the fraction of ischemic heart disease (IHD) attributable to smoking is relatively higher in males as compared to females. Similarly, the percentage of haemorrhagic stroke caused by smoking is comparatively higher in males, ranging from 4–12% as compared to that of females (<1–9%).³ Subsequently, the study concluded that smoking causes up to 30% of cardiovascular fatalities.

WHO estimated that 64 million people have chronic COPD in 2004, in which the main cause of COPD is tobacco smoke.⁴ There are 448,000 COPD cases in Malaysia, with more than two-thirds of the patients being chronic smokers.⁴ In accordance to burden of disease, COPD is ranked fifth in Malaysia while there is increasing COPD admissions and deaths reported.⁴

The current burden of lung cancer due to smoking in the Asia-Pacific region accounts up to 50% of deaths from the disease in men and up to 40% in women depending on the respective country.⁵ Similarly, in a study carried out in University Malaya Medical Centre, Kuala Lumpur, it is demonstrated that the majority of the lung cancer patients were smokers.⁵ This is further supported by an article which pointed out that 92% of Malaysian male lung cancer patients have a significant smoking history.⁶

Determinants of smoking

Despite evidences pointing to the high mortality and morbidity rates associated with smoking, tobacco consumption is prevailing, especially in low- and middle- income countries.¹

Cigarette smoking is a manifestation of nicotine addiction and smokers have individual characteristic preferences for their level of nicotine intake.⁷ Experimenting with smoking often occurs in early teenage years and is primarily driven by psychosocial motives; act of rebelliousness, backgrounds which favour smoking (smoking in parents, siblings, peers and in schools) and also psychological wellbeing (low self esteem, and poor achievers in school).⁷ Upon initiation of smoking, the young ones experience craving for cigarettes and subsequently are addicted to nicotine. Thus, the primary reinforcing nicotine addiction ultimately sustain smoking behaviour, however, the social and economic factors are critical in determining the patterns of smoking prevalence and cessation.⁷

Surveys gathered from Global Tobacco Surveillance System and WHO World Health Surveys have shown that four fifth of the world's 1.1 billion smokers are from low or middle-income countries. East Asian countries accounted for high percentage (38%) of smokers.¹ In Malaysia, prevalence of smoking among adults aged 18 years and above were more than 20%, in which more than half (49.4%) are males as compared to women (3.5%).⁹ Also, the proportion of heavy smokers was higher among males (33.7%) than among females (17.7%).⁸ The high proportion of male smokers in Malaysia correlates to the social norm that smoking behaviour is acceptable for men and smoking by women is not socially approved, although

such disapproval is not universal. However, the prevalence of female smokers is rising (from 3.5% in 1997 to 4.0% in 2002),⁸ as there is no longer any stigma attached to urban 'professional' woman smoking.

In a study conducted to assess demographic and socioeconomic determinants of smoking in low and middle-income countries, it was found that individuals were more likely to smoke if they had little or no education, regardless of gender differences, or demographic distribution.⁹ The findings maintained the association between smoking and poverty; highest rate of smoking was observed in males in the lowest wealth quintile.⁹ Incidentally, in Malaysia, the prevalence of smoking is highest among the socio-economically disadvantaged. In a study carried out among Malays in rural community, approximately 60% were smokers; of which 40% were current smokers.¹⁰

In Malaysia, there is a significant association between smoking and race as demonstrated in a study carried out among the community.¹¹ It is concluded that smoking is most prevalent in Muslim Malay community; the proportion of current smokers was highest amongst Malays (55.6% in males), followed by Bumiputra Sarawak (50.9% in males, 5.2% in females), Bumiputra Sabah (50.2% in males, 2.6% in females), Chinese (34.2% in males, 2.8% in females) and Indians (33.4% in males, 0.5% in females).¹¹ The high smoking rate among Muslim Malaysians could be attributed to the religious controversy about the classification of smoking: 'makruh' (discouraged) or 'haram' (prohibited).¹² Actions that fall under 'haram' category are religiously unlawful under the Islamic Law.¹² As such, choosing to believe that smoking is not 'haram' could be the one of the explanations regarding the high prevalence of smoking in Muslim community.

Malaysia Tobacco Control Programmes

The World Health Organization Framework Convention on Tobacco Control (WHO FCTC) was introduced as a coordinated and national effort to reduce prevalence of tobacco use and subsequently to reduce tobacco-attributed diseases and mortalities. In line with this, Malaysia has initiated a comprehensive tobacco control programme which includes the Control of Tobacco Product Regulations and its enforcements, the tobacco duty, the national anti-tobacco campaign, school-based programmes and Quit Smoking Clinics.¹³

The anti-tobacco promotion with the Tak Nak ('Say No') mass media campaign was implemented in Malaysia in 2004 and it was held at national levels through various mass media channels such as television, newspapers, radio, cinema, billboards, school advertising panels, giant posters and community boards.¹⁴ The campaign is targeted at the younger population, primarily as preventative approach to reduce initiation of smoking among the youths. However, according to a survey conducted among young female Malaysians, it was found that over 90% of the respondents have been exposed to anti-smoking messages driven by the campaign.¹⁴ However, when asked about their feedback on its effectiveness, most of them felt that the campaign is not effective, particularly for non-smokers.¹⁴ 'Tak Nak' campaign was publicly carried out and helped in raising public awareness, however, it did not succeed because there was no significant drop in number of smokers.¹⁵ In addition, the government has reviewed the Tak Nak campaign following reports and criticisms over its lack of direction.¹⁵

In Malaysia, under the Control of Tobacco Products Regulations, smoking in public places is restricted and there is a comprehensive ban on tobacco advertising, promotion and sponsorship; advertising of tobacco products in mass media is prohibited, and all cigarette packets carry a general health warning.¹⁶ However, a major defect in Malaysian tobacco control is that tobacco industries undermined the Health Ministry's efforts to implement tobacco control legislation and delayed governmental initiatives to control tobacco consumption.¹⁶ The statement is substantiated with the delay in the enforcement of Malaysia's legislation in 2004, banning the sale of single sticks and kiddie packs to 2010.¹⁷ The findings of a study carried out among Malaysian teenagers who had smoked and adults who had involved in quit smoking programmes demonstrated that Malaysian tobacco control policies are perceived to be a failure based on poor enforcement, failure of retailers to comply with the law, social availability of cigarettes to teenagers and the availability of cheap, smuggled cigarettes.¹³

Quit Smoking Clinic (QSC)

In accordance to Tobacco Cessation Clinic (TCC) which was initiated by the WHO and the Ministry of Health of India, the first Quit Smoking Clinic (QSC) in Hospital Ipoh, Perak was established in Malaysia in 1996.¹⁸ In a study carried out among smokers attending QSC in Peninsular Malaysia, it is found that the overall smoking cessation rate is 17.3%, which is comparatively lower than that of developing countries, with quit rates of 25-25%.¹⁸ However, QSCs within Malaysia have markedly different success rates; the Tanglin Community polyclinic is the best performing Quit Smoking clinic in Malaysia with the quit rate of 51.2% in 2008.¹⁹ The findings of quitting rates differences between QSCs in Malaysia suggested that there may be differences in the way the treatment is delivered which affect success rates.¹⁸ While further researches are needed to assess the standard of treatment of QSCs nationwide, studies conducted in Malaysia have demonstrated that the effectiveness of QSCs among smokers of the older age groups.²⁰ Presently, there is lack of statistics to evaluate the public's response to QSC, however, given the large proportion of smokers self-referred into QSC,¹⁸ it is assumed that the public are receptive to the setting up of QSCs. This is probably due to the focus approach of QSC which resonates with smokers who are struggling to quit smoking.

Why is it a Health Promotion programme?

Smoking is considered to be an individual choice and a socially learned habit. Therefore, in ensuring smoking cessation to be a health promotion success, it is necessary to identify the tributary factors for smoking and also reasons behind the relapse among smokers despite their motivation to quit. Therefore, interventions incorporating individual-based approach are required for a long term smoking cessation.

Tobacco control programmes implemented in Malaysia such as the Control of Tobacco Product Regulations and *Tak Nak* campaign are directed to the community as a whole; the tobacco control legislation functions as to restrict tobacco consumption and the campaign aims to educate the public about the dangers of smoking. While these interventions serve to reduce prevalence of smoking in Malaysia, however, they do not address the innate context of

it, which deals with reasons as to why smokers persist in smoking because ultimately, smoking is an acquired habit that can be changed with an appropriate approach.

QSC is regarded as a health promotion programme as QSC advocates smoking cessation at individual level and subsequently, to the community as a whole, utilising personal behaviours and environmental factors to help smokers in quitting. In the long run, this may project positive changes in Malaysian tobacco control programmes. Ultimately, the burden of ill health associated with smoking as mentioned can be reduced.

Cost effectiveness of QSC

At present, there are inadequate analyses being conducted on the cost-effectiveness of QSCs in Malaysia despite studies demonstrating the effectiveness of QSCs. Therefore, to estimate the cost-effectiveness, it is reasoned that according to Malaysia's Clinical Practical Guidelines on Treatment of Tobacco Use and Dependence, QSCs in Malaysia utilises nicotine replacement therapies (NRT) among the pharmacotherapy interventions.²² As such, the relative cost-effectiveness of QSCs is loosely rendered as the cost-effectiveness of NRT. Table 1 summarises the global and regional cost-effectiveness estimates for the standard approaches to tobacco control.²¹

From the table, it is demonstrated that in central Asia region, NRT is relatively the least cost-effective intervention. However, it is imprecise to deduce that Malaysia's QSCs is not cost-effective with references to the cost-effectiveness of NRT alone as it is a collective data which serves as a global estimation of the efficacy of the interventions. Furthermore, QSCs provide other means of pharmacotherapy interventions such as sustained release bupropion in addition to counselling sessions.²² Also, characteristics of the population of smokers are likely to account for the effectiveness of the interventions. Subsequently, the cost-effectiveness of an intervention is not the economical evaluation per se; it takes into account of the health outcomes of the targeted populations. Studies conducted in Malaysia demonstrated the effectiveness of QSCs in reducing smoking prevalence, especially among the older population.²⁰ Nevertheless, more extensive studies are necessary to examine the cost-effectiveness of QSCs in Malaysia.

Management of QSC and its control strategies

Quit Smoking Clinics were initiated and funded by Health Promotion Division, Ministry of Health Malaysia as a clinical approach to tobacco control interventions. Presently, there are approximately 294 QSCs nationwide²³ which are dedicated to the public who needs assistance to quit smoking. In a study conducted among Malaysian smokers, it was demonstrated that the mean age of smokers attending QSCs were aged 44 years old.⁹ There were not many smokers in the 20-30 years old age group.¹⁸ Most of the smokers attended the clinic were self-referred, or referred by family members, friends or their doctor.²⁰

The framework of the organisation of QSC is the Malaysian Clinical Practise Guidelines (CPG), in which the standard practice of treatment includes free nicotine replacement therapy (NRT) to smokers and specific counselling and behaviour modifications.²² QSC is managed by health care professionals, especially so with the implementation of the Certified Smoking

Cessation Provider (CSCSP) in Malaysia.²⁴ Through this programme, community health providers, especially pharmacists are coached to assist smokers in quitting.²⁴ Subsequently, certified smoking cessation providers are more competent in managing behavioural change in smokers given their medical expertise in pharmaceutical field as well as the communication skills gathered from the CSCSP in approaching smokers.

Quit smoking sessions incorporate cognitive-behavioural interventions whereby counselling and advice are provided by trained quit smoking personnel. At the onset of enrolment, the smoker is assessed on his/her dependency on tobacco, and is then advised to quit smoking. Additionally, patient's willingness to quit needs to be taken into account before assisting patient in quit attempts such as behavioural modification and pharmacological therapies. Frequent follow-up sessions are then scheduled depending on patient's quit smoking status with minimum 10 minutes per session and minimum conduction of 4 sessions.²²

On a pharmacological approach to smoking cessation interventions, Nicotine Replacement Therapy (NRT) is primarily employed to counter nicotine addiction; it was mentioned previously that cigarette smoking among chronic smokers is a manifestation of nicotine addiction. NRT reduces the dependency on cigarette smoking as the treatment supplies nicotine through other means apart from smoking such as nicotine gum, patch and inhaler.²² The usage of NRT has been proven to be effective in treating tobacco dependence, however, the effectiveness of NRT was not evident in Malaysian QSC.¹⁸ This may be due to selection of QSCs in the study in which most of the clinics did not prescribed NRT to the smokers.¹⁸

NRT products are applied when smokers are in the midst of quitting, however, non-NRT treatment such as Bupropion SR is administered during the initiation phase, in which smokers begin the attempts of quitting.²² The antidepressant property of Bupropion is utilised as smoking cessation may exacerbate depression and smokers with depression are at increased risk to relapse.²²

Ethical Issues

Smokers attend Quit Smoking Clinic either voluntarily (self-referred) or involuntarily (referred by closed ones or doctor). One of the components of Malaysia CPG specified that patient's willingness to quit should be determined prior to initiating treatment.²² It is also stated that if the patient is unwilling to quit, motivational interventions are employed to motivate patient to quit smoking.²² However, ethical considerations are significant when a patient who is unwilling or is reluctant to quit, and yet is forced to stop smoking following persisting insistence by the smoking cessation personnel. While the personnel serves in the best interest of the said patient, however, the patient's autonomy matters as smoking behaviour is a personal choice and the patient should not be coerced to transform his/her smoking habits against his/her will.

Conclusion

Given the large proportion of Malaysians who practises the Islamic faith and also the high prevalence of smoking in the Malay community,²⁰ religious approaches are incorporated into one of the control measures for reducing smoking prevalence²⁰. When addressing patient's

Islamic faith to motivate patient to quit smoking, great cautions are needed to be taken as religious issues is a sensitive area of focus, particularly so as there is an indistinct understanding as to whether smoking is 'haram' or 'makruh'; despite the recently established fatwa that smoking is 'haram' in Malaysia.²⁵ It is of importance that the smoking cessation personnel should respect patient's religious beliefs and opinions on smoking and not imposing his/her beliefs on the patient to get the patient to quit smoking. Ultimately, further studies can be carried out in determining potential confounding factors influencing smoking cessation, such as religious approaches in driving quit smoking approaches, instead of tobacco control programmes per se. Also, it is observed that most studies conducted in Quit Smoking Clinics in Malaysia are in Peninsular Malaysia and mostly from urban settings.²⁰ Therefore, future studies can be conducted in rural background to have clear insight into the rural settings; the predisposing and risk factors as well as the effectiveness of the tobacco control interventions.

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Table 1: Cost per quality-adjusted year of life saved (QALY) for different policies and countries

Policy options	High income countries including most western and northern European countries	Eastern Europe and central Asia
Price increase on tobacco by 10%	US\$ 161-645	US\$ 4-15
A combination of other(non-price) measures	US\$ 1347-5388	US\$ 64-257
Publicly provided nicotine replacement therapies	US\$ 746-1160	US\$ 227-247

Source: *Global and regional estimates of the effectiveness and cost-effectiveness of price increases and other tobacco control policies*²¹