THE CONCEPTUAL FRAMEWORK IN IMPROVING ANTI-SMOKING STRATEGIES IN MALAYSIA

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Abstract

This paper proposes a conceptual model for establishing a new approach to improvise anti-smoking strategies. The Tobacco Control programme under the World Health Organization (WHO) has established MPOWER measures to be applied globally. Although numerous approaches have been implemented, there is a knowledge gap pertaining to the positive impact of these strategies. Therefore, analyzing current approaches and establishing new strategies will be beneficial for the tobacco control movement. The proposed model has been adapted from the Medical Research Council (MRC), United Kingdom framework for complex interventions which can be used as reference for researchers to develop a new initiative or strategy for tobacco control. This proposed model incorporates three phases, which are (i) Phase 1: To identify factors influencing stop smoking desires and their successfulness among "specific location" population, (ii) Phase 2: To analyse available smoking cessation strategies globally using systematic review, and (iii) Phase 3: To develop new potential tools/products/guidelines for anti-smoking promotions based on Phase 1 and 2. The novelty of this concept in developing anti-smoking strategies is the incorporation of local needs in Phase 1. This research may contribute significantly to stop or quit smoking behavior among Malaysians. At the end of this study, researchers will be able to recommend new and/or adapted tools/products/guidelines based on the framework discussed. Also, government regulations regarding cigarettes should be properly reviewed in order to achieve more significant results whilst minimizing expenses for anti-smoking campaigns.

Keywords: Conceptual Model, Anti-smoking Campaign, Health Care Providers, Smoking Cessation Clinics

Introduction

Tobacco smoke contains a complex mixture of toxic and hazardous chemicals that harms the human body both directly and indirectly. These unsafe substances can diffuse into vital organs within 10 seconds of the first puff (1). The World Health Organization (WHO) has stated that almost 7 million people are killed by tobacco every year. First hand smokers account for 6 million deaths, while 890,000 deaths are attributed to secondhand smoke exposure (2). Yet, smokers are still unable to quit the addiction. Various approaches have been implemented to aid smokers in quitting this habit, such as increasing the price of cigarettes and featuring graphic warning labels on cigarette packaging to enhance public awareness.

In 2015, approximately 22.8% of Malaysian men and 1.1% of Malaysian women aged 15 and above were smokers. At the same time, 37.1% of Malaysians were exposed to secondhand smoke (3). According to Creamer et al. (2018), the largest proportion of adult smokers worldwide in 2018 were among people aged 25–44 years and 45–64 years (4). Cigarette smoking was the lowest among people aged 18–24 years, and men (15.6%) were more likely to be cigarette smokers compared to women (12.0%).

In nurturing a healthy community, the Ministry of Health (MOH) Malaysia has introduced smoking cessation clinics known as Quit Smoking Clinics (*Klinik Berhenti Merokok*) within local health clinics (*klinik kesihatan*) around Malaysia in conjunction with their anti-smoking campaigns. However, due to lack of promotion, most smokers do not realize the existence of these cessation clinics. Instead of primarily displaying posters in clinics only, there should be better dissemination of information as well as increasing target areas for promotion (5). Healthcare providers can also aid public awareness by allocating an additional time

slot during a health check-up to highlight the steps to smoking cessation. Thus, people who come to the clinic for any treatment are alerted to the existence of such programmes. The National Health and Morbidity Survey 2015 revealed that approximately 50% of Malaysian smokers had attempted to stop smoking and only one in ten of them had visited a healthcare provider in the past 12 months (3).

Nowadays, as technology expands, most people in the community have a partial idea that smoking can harm their health and the people around them. It is also believed that educational background affects community awareness regarding smoking and anti-smoking campaigns. People exhibit differences in attitudes and practices towards anti-smoking campaigns based on their educational background (6).

Smoking not only affects the health of smokers themselves, but also the people around them. Family members of these smokers are likely to suffer from the effects of tobacco exposure as passive smokers, especially children and the elderly. Indeed, smoking will certainly increase the cost of family healthcare. In Malaysia, the tobacco industry is estimated to be worth more than USD$2 billion annually, with further collaborations between multinational companies dominating the industry (7). Based on the Malaysia Ministry of Health Annual Report 2011, the second highest number of patients admitted to hospitals were due to illnesses related to the respiratory tract (10.36%), subsequent to pregnancy and childbirth (8). This also entails that the government is spending a larger amount of resources to treat illness caused by smoking. According to WHO (2011), if smoking patterns across the globe do not change, more than 8 million people will die from tobacco-related illnesses each year by 2030 (9).

Studies that measure knowledge, attitudes and practices among community members towards anti-smoking campaign are relatively small in number. As a matter of fact, there is a lack of studies related to the community's awareness and perception towards anti-smoking campaigns. Undoubtedly, the effectiveness of these campaigns are low due to the lack of integration with local needs.

Many initiatives have been conducted by the Malaysian government to reduce the number of smokers, including the anti-smoking campaign "Say No to Smoking" in 2004. However, they have not demonstrated any desired effects on Malaysian smokers. Mortality due to smoking may also increase to 30,000 individuals by 2020 (10). Even though people recognize the negative impact of smoking, the number of smokers is still increasing. Hence, these campaigns must proactively approach the public as the government has spent money to ensure that these clinics are well-operated, through subsidizing nicotine replacement therapy and hiring pharmacists, for RM 7.15/20 minutes, and specialists, for RM 16.94/20 minutes (11). Typically, smokers who attend "*Klinik Berhenti Merokok*" in Malaysia are predominantly male, middle-aged and educated; most of them were successful in quitting (12). However, according to Ministry of Health Malaysia (13) despite the minor reduction in prevalence of tobacco smoking, the trend shows low success outcome.

There are currently several smoking cessation strategies established including clinical practice guidelines on smoking cessation by countries, pictorial warnings on cigarette packaging, nicotine replacement therapy, policy adjustments, counseling therapy, advertisements, internet interventions and contraceptive therapy. However, there is insufficient data regarding the effectiveness of these smoking cessation strategies and their outcomes. Thus, by conducting a systematic review, these strategies can be evaluated for their potential to be implemented in Malaysia. Hopefully, this study will provide the necessary information for smoking reduction based on the specific needs of the local community and provide better direction for the development of anti-smoking interventions in Malaysia.

Research conceptual framework

Anti-smoking campaigns play a vital role in reducing the number of tobacco users (14). However, these campaigns have not made a huge impact on the number of smokers who eventually quit smoking. Previous research conducted among Malay, male smokers showed that only 18.4% of them agreed that anti-smoking campaigns were successful in increasing their awareness regarding the dangers of smoking, yet they were still less concerned about their own well-being (15).

The proposed model has been adapted from the Medical Research Council (MRC) 2019 framework for complex intervention which can be used as reference by researchers to develop a new initiative and/or strategy for tobacco control (Figure 1) (16). The MRC framework provides guidance on the development, evaluation and implementation of complex interventions to improve overall health.

It is intended to help researchers to choose an appropriate method and to understand the constraints of evaluation design. However, this concept research will focus only on the development stage and will be conducted in three continuous phases using mixed methods and approaches to obtain the necessary information required (Figure 2), which are:

Phase 1: Identify factors influencing stop smoking desires and successfulness among "specific area" population

This phase will be conducted using quantitative and qualitative approaches to identify and explore the main factors that contribute to the problem mentioned above in "specific area" population. Predetermined criteria shall be established in order to ensure validity of the study.

A quantitative research using random convenience sampling with cross sectional study design will be applied

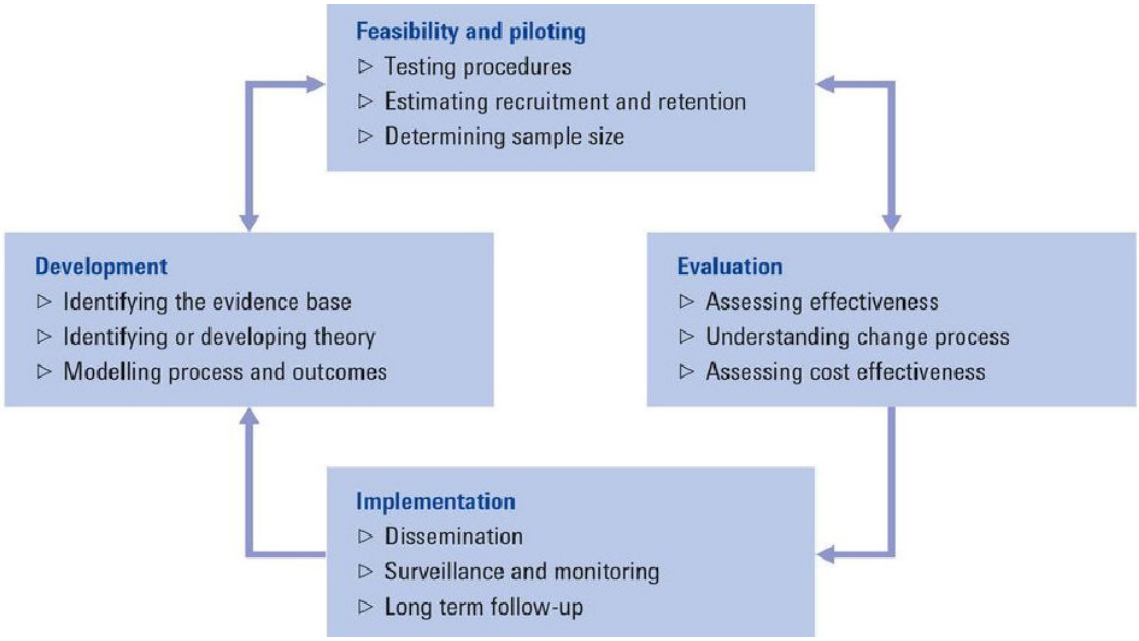

Figure 1: Complex intervention guidance adapted from Medical Research Council (2019) (16)

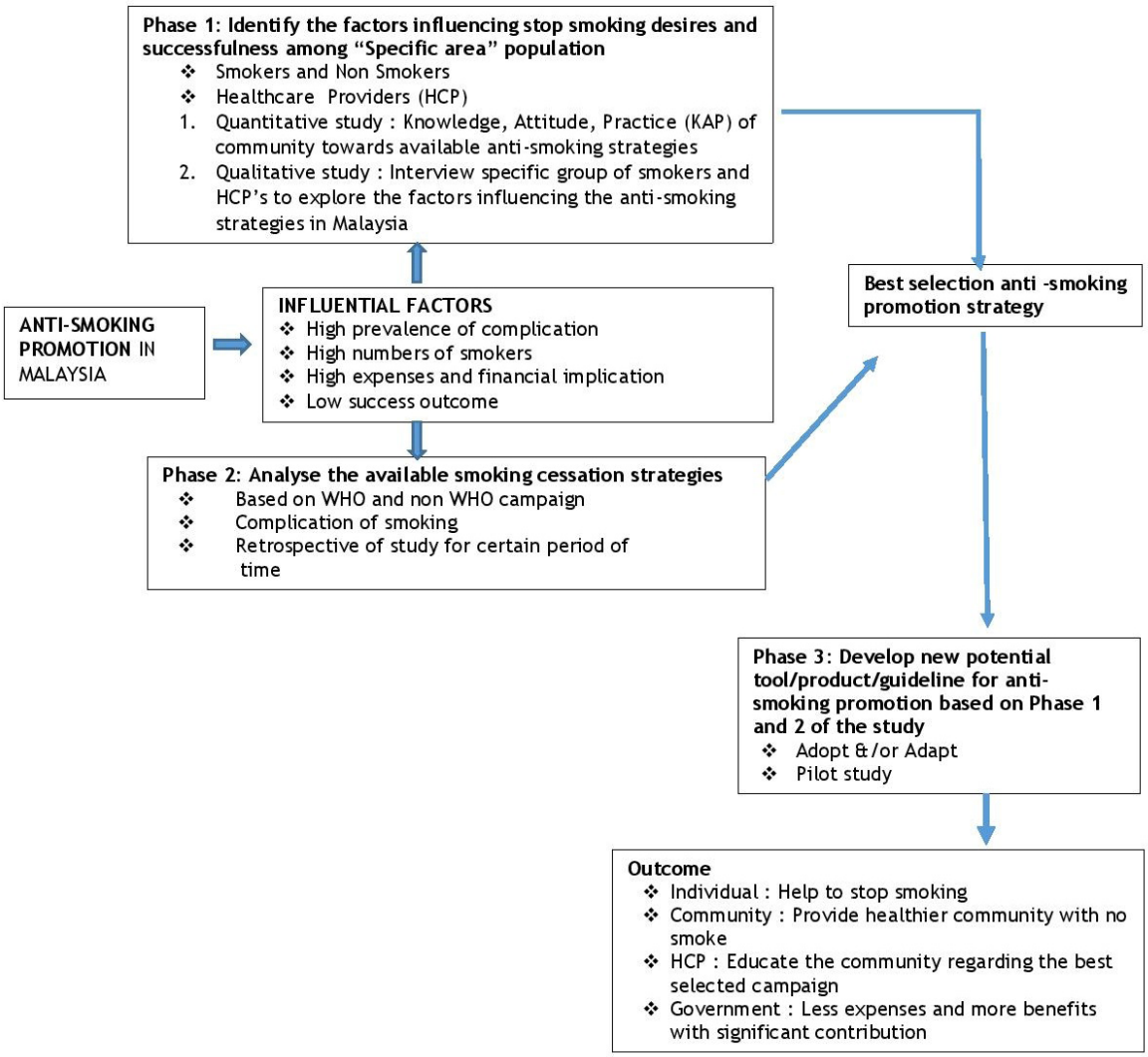

Figure 2: Research flow of conceptual framework

and validated questionnaires will be distributed among those eligible respondents in "specific area".

In this research framework, a mixed method approach will be implemented. A qualitative study will be conducted using interviews and group discussions in order to explore the main factors that influence anti-smoking strategies in Malaysia on the basis of the opinion of smokers and healthcare providers. The Transtheoretical Model (TTM) is used in the qualitative study aspect of this research (Figure 3). TTM is a behavioral change model that was developed by Prochaska and DiClemente in the 1970s. This model was introduced to examine the experiences of smokers who quit. TTM explained that behavior cannot be changed quickly, but can occur through a process. TTM described five stages of change which are precontemplation, contemplation, preparation, action and maintenance (17). Stage 1, precontemplation, is the stage in which the smoker has no thought of quitting smoking. Meanwhile, stage 2, contemplation, is the stage when the smoker seriously considers the advantages and disadvantages of the changes. The positive lifestyle modifications are portrayed in stage 3, preparation. At this phase, the smoker prepares for specific actions needed for betterment. The action phase, which is stage 4, the smoker implements the changes needed. The last stage, which is stage 5, maintenance, is described as the smoker's efforts to change permanently by stopping themselves from actions that lead to smoking. Exploring the perception and behavior of smokers at each stage is beneficial. It is necessary for healthcare professionals to provide continuous encouragement and support so that these positive changes can be maintained.

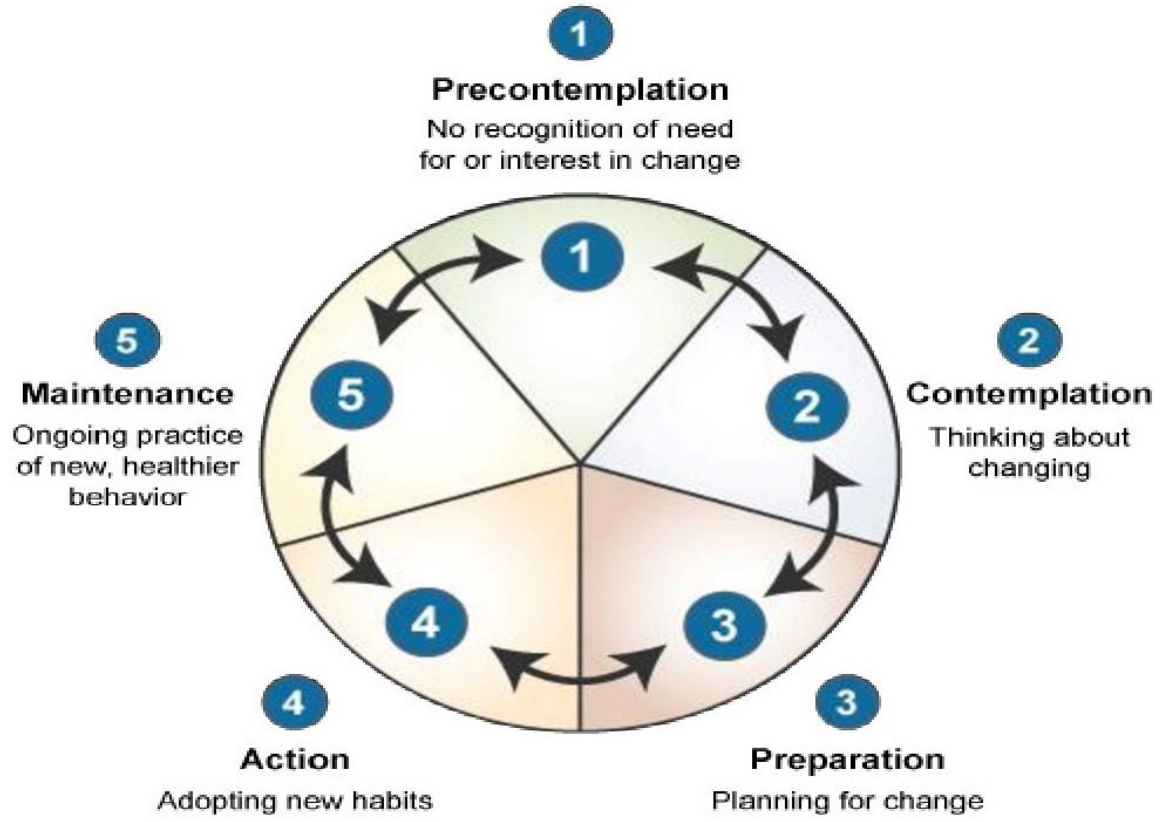

Figure 3: Theoretical framework - the Transtheoretical Model (TTM)

Phase 2: Analyse available smoking cessation strategies globally using systematic review

In order to perform analysis on available smoking cessation strategies, Phase 2 of the study will be conducted using a library search. The effectiveness of various strategies will be analyzed to be used as a guideline in this study. A retrospective, systemic review will be used to identify the most successful smoking cessation strategies around the world. This review shall use electronic databases and online library searches of published studies within a specific timeframe related to smoking cessation interventions conducted worldwide. Predetermined criteria shall be established to ensure the appropriate scope of the study.

Phase 3: Develop new potential tools/products/ guidelines for anti-smoking promotions based on Phase 1 and 2

Based on data from Phase 1 and 2, Phase 3 will focus on developing or adapting potential tools/product/guidelines for anti-smoking campaigns. The product will then be validated by a content expert and also a simple pilot study to ensure reliability of the product. The target group of this tool/product/guidelines are adult smokers in a "specific location".

The factors identified in Phase 1 obtained from the local community will be incorporated with the data from Phase 2. Based on the outcomes of Phase 2, a new or adapted tool/product/guidelines will be identified. Validation of the tool/product/guidelines shall be performed to ensure suitability and practicality of the proposed tool/product/ guidelines.

Conclusion

This conceptual framework illustrates the main factors of why anti-smoking campaigns held in Malaysia have low impact. The findings of this research can be used to develop future smoking cessation strategies around the globe. The strategies developed through this framework is considered as active, on-going anti-smoking approaches based on current local needs and time. Thus, this conceptual framework is important in improving the effectiveness of anti-smoking promotions that will be conducted in the future by analyzing the weaknesses of previous approaches.

Acknowledgement

The authors would like to thank all team members who contributed to this article.

Competing interests

The authors declare that they have no competing interests.

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