

Covid-19 Pandemic: Help-seeking for Smoking Cessation among Adult Smokers in Malaysia during the Full Movement Control Order (FMCO)

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ABSTRACT

INTRODUCTION: In Malaysia, death due to tobacco smoking habits recorded as more than 23 thousand yearly. Hence smoking cessation should be emphasized to reduce the annual mortality and morbidity. The purpose of this study is to identify the help-seeking behavior in smoking cessation among adult smokers and to determine its predictive factors during the Full Movement Control Order (FMCO) in Malaysia. **MATERIALS AND METHOD:** Data were collected from cross-sectional surveys of Malaysian adult smokers. The questionnaire was distributed online through the official social media account of the Ministry of Health Malaysia (MOHM) which commenced from 31st May 2021 in conjunction with the World No Tobacco Day. A multivariate binomial logistic regression was employed to analyze the relationship model between the predictors with the help-seeking for smoking cessation. **RESULT:** Out of 2,545 Malaysian adult smokers who have responded, 2,303 were males (90.5% of respondents) with mean age(sd) of 34.82(8.11) years (18 to 77 years). Slightly half (n=1353, 53%) have reported seeking help for smoking cessation and (n=1468, 57.7%) reported being unaware of the quitline services. Factors, such as quit smoking attempt (OR; 1.844, 95% CI = 1.384-2.458), Covid-19 pandemic situation (OR; 1.841, 95% CI=1.553-2.183), being married (OR: 1.279, 95% CI = 1.04-1.57), unaware about quitline services (OR; 0.660, 95% CI = 0.557-0.781), non-alcohol drinkers (OR; 0.658, 95% CI=0.473-0.916) significantly predicted the behaviour of help-seeking for smoking cessation. **CONCLUSION:** The results of this study would potentially support public health efforts in Malaysia in further enhancing health promotion and education programs as well as further strengthen the policy towards quit smoking issues.

Keywords

Help-seeking, Smoking Cessation, Covid-19 Pandemic, Health Education, Adult Smokers

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Received: 9th May 2022; Accepted: 17th
October 2022

<https://doi.org/10.31436/imjm.v214>

INTRODUCTION

The prevalence of smokers in Malaysia has shown a slight decrease at 21.3% presently, compared to the years 2015 and 2011 which recorded a prevalence percentage of 22.8% and 23.1%, respectively.¹ However, there are still more than 23 thousand deaths recorded in Malaysia every year as a result of smoking habits.² Attempts to quit smoking by age in Malaysia showed that smokers in the age group of 15 to 19 years recorded the highest percentage,¹ which means that the percentage of smoking cessation attempts among adults in Malaysia is unfavorable. Therefore, to prevent morbidity and mortality as a result of smoking behavior, smoking

cessation services need to be expanded and improved in line with the goal of the Malaysia National Strategic Plan on Tobacco Control 2015-2020 (NSPTC) to reduce the prevalence of smoking among Malaysians to reach 15% by 2025.³ The Covid-19 pandemic is expected to encourage smokers to quit smoking, as a previous study has reported that compared to non-smokers, the risk of smokers being exposed to Covid-19 infection is much higher and more severe.⁴ In fact, a clinical study conducted in Malaysia in 2021 found that smokers have a higher risk of having Covid-19 complications, such as acute respiratory distress syndrome, renal injury and acute liver injury compared to

non-smokers.⁵ Moreover, smokers themselves also believe that smoking habits increase the risk of infection and the severity of symptoms if infected by Covid-19.⁶

The majority of smokers want to quit smoking but do not receive the assistance they require.⁷ Therefore, studies on help-seeking to quit smoking patterns among smokers are needed. Previous studies before the Covid-19 pandemic reported that research on the issue of help seeking to quit smoking was relevant for further work, particularly on smoking cessation planning and policies and suggested that research is needed to look into changes in smoking behavior during the Covid-19 pandemic.^{7,8} Hence, this study was conducted to identify help-seeking for smoking cessation among Malaysian adults and to determine its predictive factors during the Full Movement Control Order (FMCO). This study was conducted a day before the announcement of the Full Movement Control Order (FMCO) on May 31st, 2021 in conjunction with the celebration of the World No Tobacco Day. The Full Movement Control Order (FMCO) or 'total lockdown' in Malaysia began on June 1, 2021. The full closure involved the social and economic sectors in Malaysia, save for the essential sectors that have been listed by the National Security Council of Malaysia.⁹ The decision was taken as a step to flatten the Covid-19 infection curve, which saw the number of new infections exceed 8,000 cases and the number of deaths continued to rise.⁹ The psychological distress among Malaysians as a result of the Covid-19 crisis and the economic crisis can indirectly affect the smoking behaviour in Malaysia. The Covid-19 epidemic that is plaguing the world today has caused unexpected changes in routines and changes in health behaviours.¹⁰ As a result, this study is unique in that it is the only study on help-seeking for smoking cessation that was undertaken among adult Malaysian smokers during the first phase of FMCO nationally.

MATERIALS AND METHODS

This study was a cross-sectional study using a snowball sampling method. Constraints on access and time have prompted researchers to conduct research via online means and use questionnaires in the form of online scaled assessments.¹⁰ Therefore, online data collection was used

in this study. The questionnaire was distributed online through the main official Facebook account of the Ministry of Health Malaysia (MOHM) starting from 31 May 2021 in conjunction with the World No Tobacco Day. Apart from that, the other MOHM's official social media accounts, such as Twitter account and Instagram account were also used to distribute the questionnaire. Social media users were encouraged to share the questionnaires provided to their family members and friends who are smokers. Researchers' information, study information and consent forms were provided in the questionnaire on the first page with the questions "Do you agree to participate in this study?" with a single choice answer, *Yes, I agree" or *No, I do not agree*. The selection of MOHM's main social media, such as Facebook, in the process of data collection offers an advantage to this study as Malaysians in particular, make MOHM's official Facebook as one of the main mediums for them in obtaining the latest information about the Covid-19 pandemic. In fact, the online approach was a successful medium for the dissemination of community-based research.¹¹

PARTICIPANTS

This study was a self-selected sample study among Malaysian smokers aged 18 years and above. The Malay and English versions of the questionnaires were provided. A total of 2,545 adult smokers filled out the questionnaire voluntarily. Figure 1 shows the distribution of respondents in this study - namely, there are 13 states (Johor, Melaka, Negeri Sembilan, Selangor, Perak, Kedah, Pulau Pinang, Perlis, Kelantan, Terengganu, Pahang, Sabah and Sarawak) and 3 federal territories (Putrajaya, Kuala Lumpur and Labuan) in Malaysia.

MEASURES

The questionnaire in this study was self-constructed by the researchers in accordance with the Covid-19 pandemic situation. The questionnaires were filled out by the participants (self-administration). The email address of the main researcher was provided in the questionnaire to facilitate participants in asking any questions regarding this study. The questionnaire contained several sections,

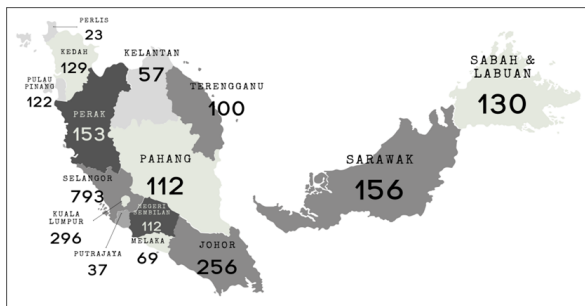


Figure 1. Distribution of respondents by the state in Malaysia (n=2545).

such as sociodemographic and smoking profile; and two main questions were asked, the first being a question regarding the urgency to seek help to quit smoking through phone call, such as "Are you interested in getting smoking cessation help by phone call?" with a choice of answers, *Yes, I'm interested* or *No, I'm not interested*. The second is a question regarding the Covid-19 pandemic situation and smoking behaviour with

Table 1. Demographic characteristics and smoking profile of study participants (n = 2545)

Characteristic	Numbers n=2545	Percentage (%)	Mean (Standard deviation)
Interested in getting help for smoking cessation			
Yes	1353	53.2	
No	1192	46.8	
Age			34.82(8.11)
18 – 29 years old	722	28.4	
30 – 39 years old	1190	46.8	
40 – 49 years old	507	19.9	
50 years old and above	126	4.9	
Gender			
Female	242	9.5	
Male	2303	90.5	
Chronic disease			
Yes	389	15.3	
No	2156	84.7	
Ethnic			
Bumiputera	1972	77.5	
Non-Bumiputera	573	22.5	
Religion			
Muslim	2104	82.7	
Non-Muslim	441	17.3	
Education			
Primary	24	0.9	
Secondary	894	35.1	
Tertiary/Diploma	809	31.8	
Bachelor Degree	694	27.3	
Master Degree	106	4.2	
PhD	18	0.7	
Occupation			
Unemployed	209	8.3	
Pensioner	24	0.9	
Government	456	17.9	
Private	1339	52.6	
Self-Employed	488	19.2	
Student	29	1.1	
Marital Status			
Married	1669	65.4	
Single	792	31.1	
Divorced	84	3.5	
Monthly income level			
Low income group (B40)	1929	75.8	
Middle income group (M40)	510	20	
Upper income group (T20)	106	4.2	
Family member smoking			
Yes	1587	62.4	
No	958	37.6	
Friends smoking			
Yes	2294	90.1	
No	251	9.9	
Attempt to quit smoking			
Yes	2237	87.9	
No	308	22.1	
Alcohol consumption			
Yes	396	15.6	
No	2149	84.4	
Want to quit smoking because of Covid-19			
Yes	1540	60.5	
No	1005	39.5	
Aware of quitline services			
Yes	1077	42.2	
No	1468	57.7	

questions, such as "Do you want to quit smoking because of the Covid-19 pandemic?" with the answers, "Yes" or "No".

Statistical Analysis

Descriptive and categorical variables were reported as frequencies and percentages. The relationship between the socio-demographic variables, smoking profiles, the desire to quit smoking caused by the Covid-19 pandemic situation and awareness on quitline services in relation to help-seeking for smoking cessation, were analysed using chi square analysis (Table 2). A multivariate binomial logistic regression was employed to analyse the relationship model between the predictors on help-seeking for smoking cessation using SPSS version 25. Results were presented in Table 3 as adjusted odds ratios (aOR) with 95% confidence intervals.

RESULTS

Demographic characteristics and smoking profile;

A total of 2,545 Malaysian smokers participated in this study during the FMCO amidst the Covid-19 pandemic in Malaysia. The results of the study have found that the mean age(sd) of participants in this study is 34.82(8.11), with a minimum age of 18 years and maximum age of 77 years. Out of these, a total of 1,353 (53.2%) respondents have stated that they need help to quit smoking. The majority of respondents involved in this study were men who do not have chronic diseases each recorded 2,303 smokers (90.5%), 2,156 smokers (84.7%), respectively. Bumiputeras and Muslims each recorded 1,972 smokers (77.5%) and 2,104 smokers (82.7%), respectively. As for education, many respondents did have a secondary school education and Malaysian Higher School Certificate/ Diploma or equivalent, with each subgroup recording a total of 894 smokers (35.1%) and 809 smokers (31.8%), respectively. More than half of the respondents in this study worked in the private sector with a total of 1,339 smokers (52.6%). Moreover, a total of 1,669 smokers

(65.6%) in this study were married. A majority of the respondents in this study came from the low income (B40) group, which comprised of 1,929 people (75.8%). A significant number of respondents, amounting to 1,587 smokers (62.4%) of the total, have family members who also have smoking behaviour, while a total of 2,294 smokers (90.1%) involved in this study have friends who are also smokers. Interestingly, as many as 2,237 (87.9%) smokers involved in this study had attempted to quit smoking. Of the total, 2,149 smokers (84.4%) did not practice drinking alcohol and 1,540 smokers (60.5%) have stated that they wanted to quit smoking as a result of the Covid-19 pandemic. Finally, a total of 1,468 smokers (57.7%) in this study were unaware of the existence of a quitline service.

Relationship between socio-demographics and smoking profile factors with the behaviour to seek help for smoking cessation;

The study results have shown that race, religion, level of education, occupation, marital status, monthly income level, having a smoker friend, having had the attempt to quit smoking, alcohol consumption, Covid-19 pandemic situation and awareness on the quitline services have a significant ($p < 0.005$) relationship with help seeking for smoking cessation among Malaysian adults. However age, gender, having chronic disease(s), occupation, and having a family member who smokes have no significant ($p > 0.05$) relationship with help seeking for smoking cessation among Malaysian adults.

Multivariate analysis showed that attempt to quit smoking (OR;1.844,95% CI=1.384-2.458), Covid-19 pandemic situation (OR;1.841,95% CI=1.553-2.183), being married (OR:1.279,95% CI=1.04-1.57), non-awareness about infoline for quit smoking services (OR;0.660,95% CI=0.557-0.781), non-alcohol drinkers (OR;0.658,95% CI=0.473-0.916) have significantly predicted the behaviour of help seeking for smoking cessation.

Table 2. The relationship between socio-demographics and smoking profile factors with the behaviour to seek help for smoking cessation

Characteristic	Are you interested in getting smoking cessation help by phone call?		p value
	Yes, I need help to quit smoking n=1353	No, I need help to quit smoking n = 1192	
Age			
18 – 29 years old	373(28.4)	349(27.6)	0.406
30 – 39 years old	655(46.8)	535(48.4)	
40 – 49 years old	256(19.9)	251(18.9)	
50 years old and above	69(4.9)	57(5.1)	
Gender			
Female	127(5.0)	115(4.5)	0.839
Male	1226(95.0)	1077(90.4)	
Chronic disease			
Yes	217(16.0)	172(14.4)	0.260
No	1136(84.0)	1020(85.6)	
Ethnic			
Bumiputera	1105(81.7)	867(72.7)	0.000
Non-Bumiputera	248(18.3)	325(27.3)	
Religion			
Muslim	1169(86.4)	935(78.4)	0.000
Non-Muslim	184(13.6)	257(36.7)	
Education			
Primary	12(0.9)	12(1.0%)	0.000
Secondary	540(39.9)	354(29.7)	
Tertiary/Diploma	431(31.9)	378(31.7)	
Bachelor Degree	312(23.1)	382(32)	
Master Degree	47(3.5)	59(4.9)	
PhD	11(0.8)	7(0.6)	
Occupation			
Unemployed	108(8.0)	101(8.5)	0.430
Pensioner	13(1.0)	11(0.9)	
Government	239(17.7)	217(18.2)	
Private	716(52.6)	623(52.3)	
Self-Employed	267(19.7)	221(18.5)	
Student	10(0.7)	19(1.6)	
Marital Status			
Single	377(29.9)	415(34.8)	0.001
Married	931(68.8)	738(61.9)	
Divorced	45(3.3)	39(3.3)	
Monthly income level			
Low income group (B40)	1046(77.3)	883(74.1)	0.040
Middle income group (M40)	262(19.4)	248(20.8)	
Upper income group (T20)	45(3.3)	61(5.1)	
Family member smoking			
Yes	867(64.1)	720(60.4)	0.056
No	486(35.9)	472(39.6)	
Friends smoking			
Yes	1236(91.4)	1058(88.8)	0.029
No	117(8.6)	134(11.2)	
Attempt to quit smoking			
Yes	1222(90.3)	1015(85.2)	0.000
No	131(9.7)	177(14.8)	
Alcohol consumption			
Yes	156(11.5)	240(20.1)	0.000
No	1197(88.5)	952(79.9)	
Want to quit smoking because of Covid-19			
Yes	922(68.1)	618(51.8)	0.000
No	431(31.9)	574(48.2)	
Aware of quitline services			
Yes	516(38.1)	561(47.1)	0.000
No	837(61.9)	631(52.9)	

Chi Square; $p < 0.05$.

Table 3. A multivariate binomial logistic regression analysis predicting the help-seeking for smoking cessation:

Characteristic	Are you interested in getting smoking cessation help by phone call?		Odds Ratio (OR, 95 CI%)
	Yes, I need help to quit smoking n = 1353(%)	No, I don't need help to quit smoking n = 1192	
Attempt quit smoking			
Yes	1222(90.3)	1015(85.2)	1.844 (1.384-2.458)
No	131(9.7)	177(14.8)	
Want to quit smoking because of Covid-19			
Yes	922(73.3)	618(51.8)	1.841 (1.553-2.183)
No	431(26.7)	574(48.2)	
Marital status			
Married	931(68.8)	738(61.9)	1.279 (1.040-1.572)
Single	377(27.9)	415(34.8)	1.111 (0.683-1.808)
Divorce	45(3.3)	39(3.3)	
Aware of quitline services			
Yes	516(38.1)	561(47.1)	0.660 (0.557-0.781)
No	837(61.9)	631(52.9)	
Alcohol Consumption			
Yes	156(11.5)	240(20.2)	0.658 (0.473-0.916)
No	1197(88.5)	952(79.8)	
Attempt quit smoking			
Yes	1222(90.3)	1015(85.2)	1.844 (1.384-2.458)
No	131(9.7)	177(14.8)	

Multivariate Binominal Logistic Regression; p<0.05

DISCUSSION

Quit Smoking Attempt and Help-Seeking for Smoking Cessation;

Quitting smoking is a difficult journey. Smokers who are in an effort to quit smoking will face a very difficult situation as it involves emotional and psychological distress.¹² This is due to peer pressure as well as misunderstanding by smokers that smoking is as an alternative to relieve boredom and stress.¹³ Thus, the results of previous studies have suggested that it is vital to provide information on quitting smoking as well as an

intervention, correcting views about the health benefits of quit smoking are required.¹⁴ As according previous research, the top motive for adults quitting smoking is to improve their finances, health, and happiness.^{17, 16} Furthermore, by quitting smoking, problems such as coughing, high blood pressure, and other health issues can be effectively managed.¹⁷ Hence, the Covid-19 pandemic provides an excellent chance and compelling incentive for smokers to quit.

Smokers who take steps to quit smoking are more likely to have an understanding of the benefits during this Covid-19 pandemic. Thus, this study revealed that smokers who had attempted to quit smoking were more likely to seek help for smoking cessation. This is an excellent chance for Malaysian authorised and quit smoking service providers to boost health promotion by advising smokers that they can seek help to quit smoking from doctors,⁷ health care professions, as well as assistance from helping professions such as social workers, counsellors, and health educators. This is because although using pharmacological interventions is able to help increase the success of smoking cessation, not all smokers who want to quit smoking are necessarily interested in using the medications.^{17, 7} A majority of smokers (87.9%) who participated in this study had attempted to quit smoking. The results of this study are slightly different from previous studies that have been conducted in Malaysia which found that only half of the smokers have attempted to quit smoking.¹⁹

Hence, considerable efforts must be made to improve strategies for promoting and educating smokers in Malaysia about the availability of professional assistance. Therefore, it may be assumed that during this pandemic, Malaysian adults may be more keen to quit smoking.

Covid-19 Pandemic and Help-Seeking for Smoking Cessation;

Surprisingly, it was discovered that more than half (60.1%) of the respondents in this study wanted to quit smoking as a result of the Covid-19 pandemic situation and it has influenced them to seek help for smoking cessation. As a result of unaffordability during the Covid-

19 pandemic, it has resulted in positive behavioural change in smokers who have a desire to quit smoking.^{20,21} This is because smokers are much more at risk of being infected by the Covid-19 virus and are at high risk of experiencing chronic lung function complications, as well as disruption to the immune system.²² In addition, smokers are particularly likely to have more severe Covid-19 symptoms compared to non-smokers.^{22,23} Apart from that, smokers with emphysema or chronic obstructive pulmonary disease will likely have to deal with reduced lung resistance and its ability to fight the Covid-19 infection.²⁴ Hence, feelings of anxiety and worry of being infected with Covid-19, indirectly affect smokers positively and encourage them to initiate quitting actions.²⁵ Therefore, the implementation of Full Movement Control Order (FMCO) enforced by the Malaysian government is believed to be a starting point for smokers to initiate smoking cessation behaviours. This is because during this period, smokers are not exposed to the external environment that is likely to put pressure and influence them to keep smoking.²⁶ In addition, FMCO naturally prevents smokers from physical purchase of cigarette products. To quit smoking is probably one of the most difficult resolution measures for heavy smokers in Malaysia and it becomes increasingly difficult when smokers are quitting on their own without professional help and clear information.²⁷ Therefore, having information on the best way to quit smoking or other reference materials to quit smoking will help smokers in the process of quitting smoking.²⁸ Hence, smokers who want to quit smoking are advised to get support from the closest individual living together and seek help from professional health care members.^{29,25} The results of this study are in line with the previous study in Malaysia that suggested doctors and other healthcare members need to be consistent in providing advice on quitting to their patients who smoke and encourage them to make some stop attempts.³⁰

Awareness on Quitline Services and Help-Seeking for Smoking Cessation

Since 2004, Malaysia has aggressively provided smoking cessation treatments. This includes smoking cessation services at government and private institutions as well as

assistance through Quitline. However, this study found that half of the respondents were unaware of Quitline services (services through phone calls) provided and were more likely to seek help for smoking cessation. Quit smoking services offered help and support as part of a campaign to encourage smokers to quit.^{31,32} Therefore, aside from actively supporting health promotion and education initiatives on the best way to quit smoking, quit smoking service providers must aggressively publicise the availability of quit smoking services in Malaysia. Moreover, a lack of information on quitting smoking and quit smoking services prevent smokers from making better decisions and choices as well as consistency in maintaining the process of quitting smoking.³² Thus, if this situation is not handled properly it will lead to delayed smoking cessation behaviour among smokers.^{33,34} Empirical studies on the smokers' literacy about smoking cessation services are needed in Malaysia. Therefore, health education activities on the dangers of tobacco use are still relevant and active health promotion and education on the existence of quitline services and other quit smoking services need to be carried out.³⁵

Marital Status and Help-Seeking for Smoking Cessation

Quit smoking benefits the health of smokers and their family members.³⁶ This study found that smokers are more likely to seek help for smoking cessation if they are married, in line with the previous findings which reported that support from spouses was found to influence smokers to quit smoking.³⁷ In fact, smokers who receive support from spouses are more likely to quit smoking compared to smokers who are single and divorced.³⁶ In addition, smokers who want to quit smoking are advised to inform and share their strategies to quit smoking with their spouses, so that the spouse will also help and support the action taken.³⁸ Quitting smoking can improve happiness and quality of life as well as the marital relationship.^{38,39} Quit smoking also prevents families from being exposed to the dangers of second-hand smoke, chronic disease complications and improved spouses' and family health conditions.⁴⁰ Other than that, quitting smoking can also give a good reflection on children and other family members.⁴¹ Hence, the decision

to quit smoking greatly helps relationships become more intimate because relationships are not only important for lust gratification, but also for ensuring marital integrity with spouses and families.

Alcohol and Help-Seeking for Smoking Cessation

Cigarettes and alcohol are two types of substances that allow a person to become addicted as well as affect their health.⁴² In Malaysia, even though alcohol is not a popular addiction, the problem of alcohol addiction still occurs. Through this study, adult smokers who do not practice drinking alcohol are more likely to seek help to quit smoking compared to those who practice drinking alcohol. While the consumption of two substances at one time is a combination that adversely affects health, alcohol and cigarettes also affect the safety of others.^{43,44} Smokers who want to quit smoking are not encouraged to practice drinking alcohol as it will be a resistance to the process of quitting smoking. This is because, if the smoker consumes alcohol, it will result in an inability to control cravings towards addiction problems.⁴⁵ In addition, abstain from alcohol consumption can also prevent smokers from social stress.⁴⁶ The effects of alcohol intake will cause damage to liver, brain, cardiovascular and immune functions and are associated with an increased risk of getting respiratory infections and acute respiratory distress syndrome.⁴⁷ Therefore, modules and guidelines on special addiction treatment towards co-occurring substance abuse problems also need to be developed in Malaysia.

CONCLUSIONS

We encourage researchers to undertake studies on smoking cessation literacy among smokers as well as smokers' knowledge of quit smoking programmes. Proactive health promotion and education actions on how to effectively quit smoking, as well as precise information on available smoking cessation facilities in Malaysia should be carried out. Both of these recommendations are required to grasp the. Both of these suggestions are necessary to understand the real situation experienced by smokers in Malaysia and allow for better action and treatment of smoking cessation. In conclusion, quit

smoking attempt, Covid-19 pandemic, being married, non-awareness of the existence of quitline services, and non-alcohol drinker, are factors that significantly influenced the behaviour of seeking help for smoking cessation among Malaysian adults. Therefore, the results of this study potentially support public health efforts in Malaysia in further enhancing health promotion and education programs as well as further strengthen the policy towards smoking issues.

LIMITATION

A limitation of this study is that the findings may not apply to the general Malaysian smokers' population. The study sample is a snowballing and self-selected sampling, and hence, non-random population bias may still be present in this study. Since the study was conducted online, smokers who do not have a smartphone or have restrictions on internet access may not have the opportunity to complete this questionnaire.

FUNDING

This research was funded by under Special Fund Scheme, Universiti Malaysia Sabah (SDK0156-2020).

INSTITUTIONAL REVIEW BOARD STATEMENT

Applications for ethical approval are obtained from the Medical Research Ethics Committee of University Malaysia Sabah through the Approval Code: JKEtika 5/20 (3). Cooperation and assistance obtained from the Health Education Division to use the MOHM's official social media in disseminating this questionnaire.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Data is contained within the article or supplementary material such as Malay-version questionnaire is available on request from the corresponding author.

ACKNOWLEDGMENTS

We gratefully acknowledge the cooperation and assistance provided by the Health Education Division and the Corporate Communication Unit of the Ministry of Health Malaysia in helping us to disseminate this research questionnaire. The study was funded under Special Fund Scheme, University Malaysia Sabah (SDK0156-2020).

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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