

Exploring Smokers Perspectives on Health Status and Health Seeking Behavior: A Qualitative Exploration

Muhamad Al-Muizz Ismail, R.N., M.Sc.¹, Nurasikin Mohamad Syariff, R.N., Ph.D.²,
Mohd Said Nurumal, R.N., Ph.D.³, Razlina Abdul Rahman, M.D.⁴,
Hanida Hani Mohd Mokhtar, R.N., Ph.D.⁵

¹Cardiology Unit, Hospital University Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia.

²Department of Special Care Nursing, Kulliyah of Nursing, International Islamic University Malaysia, Kuantan, 25200, Malaysia.

³Department of Critical Care Nursing, Kulliyah of Nursing, International Islamic University Malaysia, Kuantan, 25200, Malaysia.

⁴Department of Family Medicine, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia.

⁵Department of Medical Surgical Nursing, Kulliyah of Nursing, International Islamic University Malaysia, Kuantan, 25200, Malaysia.

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Abstract:

Objective: Smokers might tend to ignore when communicating about smoking health risks. We used Bourdieu's conceptual tool to guide and explore their perception of being healthy despite their smoking behavior and their health seeking practice.

Material and Methods: A qualitative method, using a semi-structured interview as the main method of collecting the data, was used. This method was implemented because of its flexibility in the exploration, based on participant responses.

Results: The findings are reported as per the thematic analysis of 15 purposively selected participants. The ages of the 15 participants varied from 20 to 55 years old, and they were selected from the quantitative study to participate voluntarily in this qualitative exploration. Among them, 14 were males and one was female. The ethnic representation in this qualitative part were Malays (n=14) and Chinese (n=1). The duration of smoking varied in the sample, with the majority smoking for more than five years.

Conclusion: This study better understands smokers' health perception and their health-seeking behavior. Firstly, the perception of the less harmful effects of smoking on the health of smokers was understood within the views of Bourdieu's Theory of Cultural Health Capital, which, in turn poses challenges to smoking cessation programs and campaigns. This

Contact: Hanida Hani Mohd Mokhtar, R.N., Ph.D.
Department of Medical Surgical Nursing, Kulliyah of Nursing,
International Islamic University Malaysia, Kuantan, 25200, Malaysia.
E-mail: hanidahani@iiu.edu.my

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study reported that smokers perceived themselves as healthy, and thus continued their smoking habit despite knowing its side effects.

Keywords: health-seeking behaviour, health status, smoking effect, smokers' perception

Introduction

Smoking has been primarily studied as a public health problem involving mapping continued smoking patterns and interventions designed to decrease smoking prevalence. In the Malaysian context, the figures for smokers and smoking-related diseases are of grave concern. Bearing in mind the fact that Malaysia has a shorter history of implementing tobacco control measures, smokers continue to smoke and perceive themselves as healthy; despite their smoking habits. Initially enacted in 1993, the Control of Tobacco Products Regulation imposed restrictions on smoking within seven specific categories of public venues. Over time, amendments to the regulation have broadened its applicability, encompassing a total of 38 distinct types of public areas declared smoke-free by the year 2015. These regulatory adjustments are consistent with the stipulations delineated in Article 8 of the Framework Convention on Tobacco Control, a treaty ratified by the Malaysian government in December 2005¹. Such legislative measures underscore the governmental commitment to tobacco control initiatives and reflect adherence to international accords aimed at mitigating tobacco-related harm. The current smoking population leads to a health status risk among smokers in Malaysia, and it has been reported that the smoking habit has contributed to 15 percent of hospital admissions in Malaysia, with 35 percent having been reported dead as inpatients in Malaysia Hospitals². The World Health Organisation (WHO) also reported that 8 million people have died due to tobacco-

related preventable diseases in 2017³. A previous study also indicated concerning trends in smoking behavior, with an overall smoking prevalence of 22.8%. There was a notable gender disparity, as males displayed a significantly higher prevalence at 43.0% compared to females. Furthermore, individuals with lower levels of education exhibited a smoking prevalence of 25.2%. Significant correlations with smoking were observed among males, individuals with limited educational backgrounds, and those belonging to the Malay ethnic group⁴. Thus, appropriate measures must be developed, and implementation needs to be strengthened to ensure the total number of smokers will be reduced and deaths due to smoking-related diseases will decline in the future.

Material and Methods

Aim and research questions

This study aimed to examine the health status of smokers, and to explore their perception of being healthy. In this study, Bourdieu's (1977) conceptual tool was utilised to guide the researchers to understand the modus operandi of the smokers' habitus (perception, belief, and value) of health, their capitals (social, cultural, and cultural health), their practice of seeking for health assistance and their smoking behaviour⁵. Bourdieusian scholars view the social actors (e.g., smokers) not as consciously and deliberately calculating individuals strategically pursuing planned goals, but as possessing habitus, or general styles, habits, and dispositions that indelibly influence the direction, manner,

and shape of their actions. Fields in Bourdieu's parlance are where particular kinds of goods, services, knowledge, and status are produced and circulated, which calls for different cultural skills and attributes. The field effect is not exerted mechanically; however, it is mediatized by the space of possibility; such as agents who perceive it according to their habitus⁶. In this study, 'field' refers to (1) social field, which is the smokers' social and cultural areas attributing to the norms, smoking habits, and values of the smokers in relation to their perceived (or subjective) health status, (2) health field, which is health professionals, healthcare services and health information for smoking-related diseases are available. Cultural health capital (CHC) is rooted in Bourdieu's notion of cultural capital as a means to conceptualize cultural practices and products of all kinds; ranging from: styles of dress, eating habits, verbal skills, scientific knowledge, educational credentials, and so forth as forms of capital⁷. Within the context of health care, cultural health capital refers to a particular repertoire of cultural skills, verbal and nonverbal competencies, and interactional styles that can influence healthcare interactions at a given historical moment⁷. With this in mind, as the capitals of smokers, the smokers' perception of being healthy and evaluation of their own health status, including their views and practice for seeking professional health assistance, will be explored. Through the concept of CHC, aspects of smokers' habitus and field of cultural attributes can be understood as manifestations of smokers' norms, behavior and values in relation to their perceived (or subjective) health status.

Design

Without limiting the quantitative methods' potential to identify what individuals believe is statistically significant and numerical, it should be acknowledged that qualitative methods are an intensive framework with prominent attributes in identifying contextually explanatory mechanisms

that statistical values may not achieve. This research design was chosen to investigate smokers that smoke every day but feel healthy, and to explore their health perception as well as health status among smokers in single states on the east coast of Malaysia, via an application of Bourdieu's theory as a tool guide for this study.

Setting, sample, and data collection

For this study, Hospital Universiti Sains Malaysia (HUSM) was chosen as the study setting: located in Kubang Kerian, Kota Bharu, Kelantan, which also includes HUSM's quit smoking clinic. The study setting was chosen due to the availability and possibility of recruiting smokers.

Sample

The qualitative sample size was based on the reference to the principle of saturation, data adequacy, and pragmatic considerations⁸. This current study does not have a predetermined sample size, Maltreud et al. (2015)⁹ posited that the adequacy of the final sample size must be continuously evaluated during the research process itself. In this study, the researcher employed purposive sampling in order to select information-rich cases. Determining the number of participants in the qualitative sample varied between 20–30 participants to ensure the quality of data and that the analysis was valid¹⁰. Thus, the researcher recruited 15 participants, using purposive sampling and following the principle of data saturation. The inclusion criteria included: ages above 18 years old, being a smoker, able to speak and understand Malay/English and being admitted to the medical, surgical or orthopedics ward or attending the quit smoking clinic.

Data collection

The researcher used a semi-structured interview as the main method of collecting the data. This method was implemented because of its flexibility in the exploration,

based on participant responses. Face-to-face interviews were used as the main method to derive detailed information from the smoker. Face-to-face interviews allow patients to share their perceptions in close detail and maintain their privacy.

The semi-structured interview took between 30 minutes to one hour for each selected participant in a private room, and at a specific time mutually agreed upon by the selected participant and researcher. A total of 4 participants were able to be interviewed face to face, whilst 13 participants were interviewed via online video calls in view of coronavirus disease 2019 (COVID-19) restrictions, and following regulations stated by the Malaysian government in 2021.

Data analysis

Data were collected from 15 participants using face-to-face interviews and via video call recordings, further analysed to using thematic analysis. Practically Braun and Clarke (2006) strongly suggest if a researcher does not commit using Ground Theory analysis for their theorization work, they should select thematic analysis instead¹¹. This is because thematic analysis results in the development of meaningful themes, rather than the development of theory¹². The participants' audio records were reviewed line by line and transformed into specific categories or specific codes to understand participants' opinions. During the first stages of analysis, the generated coding is then grouped into categories depending on the meaning. This made it easier for the researcher to sort the coding into categories, via the use of color coding. For thematic analysis the participants' audio records were reviewed line by line and transformed into specific categories or specific codes to allow the researcher to understand participants' opinions. The steps included in the thematic analysis are becoming familiar with the data, and reading and re-reading, generating the initial codes, coding freely and diversely, without paying

attention to the emerging themes. Then, the researcher wrote the codes in the right-hand margin of the transcript paper, searched for a theme or a categorization and found a repeated pattern of meaning. They then review the themes and this was performed at the level of the coded data, in which reviewing was carried out at the level of the themes, defined and named the themes and produced the report. The concept of confirmability is fundamental to ensure the correct finding was created by exploring participants' experiences, and not influenced by the researchers' preference or opinion, which could create bias in the findings from the participants' experiences. To ensure this, several approaches were applied. As a nurse, the researcher is aware of medical knowledge and tried to avoid using medical jargon, as a man and non-smoker, the researcher removed the judgmental barrier while interviewing male smokers, the researcher introduced himself as a postgraduate student that was conducting research, and this had nothing to do with any medical intervention in the hospital. Additionally, the researcher wrote a reflective diary to monitor how the progress of the interview and analysis of qualitative data had shaped his interpretation and analysis of the interview transcripts.

Results

Findings

The findings are reported based on the thematic analysis of 15 purposively selected participants. The ages of the 15 participants varied from 20 to 55 years old, and they were selected from the quantitative study to participate voluntarily in this qualitative exploration. Among them, 14 were males and one was female. The ethnic representation in this qualitative part was Malays (n=14) and Chinese (n=1). The majority were married, with two being single. The duration of smoking varied in the sample, with the majority having smoked for more than five years.

Findings are presented in two themes related to smokers' perceptions and their seeking health behaviour reflection:

1. Continuity in smoking habit
2. Conception on own health status

Continuity in smoking habit

This section presents the findings from the first sub-theme, "continuity in the smoking habit", for which Bourdieu's theory refers to as smokers' smoking habit. This sub-theme captures the perspective of smokers that promote their continuation of smoking despite knowing the effects of smoking and perceiving that they are healthy, contributing to further smoking behavior.

I believe the stress of work and study is the reason I continue to smoke, even though I believe it can help me relax. Even though I am aware of the risks of smoking, I believe this is the most important factor. (P3)

P3 believed that by smoking, he could calm down, and he felt that smoking was essential to him despite the smoking risks.

P4, the other participant, provided an example of when he tried to stop smoking by implementing an alternative method to fulfill his desire for nicotine. Still, it was not long-lasting since he experienced restlessness:

Yes, that is correct. I used to buy chewing gum to replenish the nicotine, but it didn't last long; I could only stand it on the first day. However, on the second and third days, I became restless, perceiving something wrong but unable to distinguish it; this could have an impact on my emotions and psychology, making me feel unsettled. (P4)

The social standing of the smoker, where this status is acceptable in Malaysian culture. Society has not reprimanded his smoking habit:

I haven't had anyone admonish me for smoking in my whole life. (P8)

The quote, highlighted by P8, indicated that his identity as a smoker is not an issue for others. Similarly, P6 agreed that he could quit whenever he wanted to.

I'd like to stop smoking, but I'm unable to do so. I have my own strategy. Perhaps when the time comes to quit smoking, I will do it without being forced to do so. (P6)

Conception of own health status

This section presents the findings from the second overarching sub-theme of the study, "conception of own health status". Bourdieu refers to these as subjective values with reference to smokers. This sub-theme captures the smokers' beliefs regarding their health status, perception of what to expect for continuing smoking and health-seeking behavior.

During my adolescence, I did not begin smoking. I am more conscious of the effects of shortness of breath than before I began smoking. During my activities, I frequently have shortness of breath. I believe it is due to my age. (P1)

P1 demonstrated this point by stating that he believes age significantly influences his present health state more than a smoking-related adverse effect. He noted that, in particular, his shortness of breath results from ageing and that smoking has a major influence on it. Overall, developing one's own perception of one's own health state has inadvertently supported the continuation of smoking through self-ideology conception.

I am currently healthy since I do not have any adverse effects from sore throat, tiredness, or asthma, and I am proud of myself because I have been healthy despite smoking for the previous three years. (P7)

Here, P7 demonstrates his current health status as healthy by proposing that he did not suffer from any side effects; such as sore throat, tiredness, or asthma. In particular, he optimistically expressed his health status as good despite having smoked for several years. Overall,

using health status as a factor has exclusively provided evidence for continuity in smoking.

Various campaigns have been widely promoted in the last decade regarding the effects of smoking in Malaysia. Here, smokers showed that their awareness was high regarding the effects of smoking, but prospectively misconstrued the side effects based on their self-belief and own conception. The majority of smokers pointed out that the promotion and pictures published by the government are not effective enough to motivate them to quit smoking; as demonstrated in the following quotation:

No, not at all. But I've heard of the quit-smoking program from my friends who have tried it and failed to quit smoking. That is why I don't think I was prepared to attend that quit-smoking program, despite the fact that I'm a heavier smoker than my friend (laugh). (P4)

The quotes above illustrated a coping mechanism used by P4 when explaining his friends' experiences that have dissuaded him from joining a quit-smoking clinic, even though the chance to participate was well acknowledged. P4 pointed to his friends' experience, which had discouraged him from quitting smoking, considering he was a heavy smoker in comparison to his peers. Although the stop smoking clinic is well known, P7 experience with his friends had become a criterion for deciding whether to join it.

I read the material from the cigarette box, and it indicated that smoking might cause diseases of the lungs and throat, but I don't believe I've contracted that disease yet. (P7)

Here, P7 indicated that seeing a smoking advertisement in a box of cigarettes had no positive influence on him. Optimistically, it was viewed as being normalised, and nothing has occurred to discourage him from continuing smoking without restriction or concern. Overall, the self-belief perception and present health conditions clearly aided in the continuation of smoking.

Discussion

Bourdieu's concepts were applied to the theoretical understanding of meaning-making between smokers and objectives¹³. The modus operandi of the smokers' habitus (perception, belief, and value) of health, their capital (social, cultural, and cultural health), their practice of seeking health assistance and their smoking behavior¹⁴. Most smoking in this study projected smoke as a method of releasing their stress during work, which provides a good vibe in ensuring that their work effectiveness is maintained and productive. Certain smokers also argued that smoking is a metaphor for delivering ideas and becoming more productive while working. These findings highlight the strength of conceptualization work using Bourdieu's in-context habit; belief from the current study indicated that smokers have vastly different views regarding their health status perception despite their smoking habits. Most smokers in this study projected smoking as a method of releasing their stress during work, which provides a good vibe in ensuring that their work effectiveness is maintained and productive. Certain smokers also argued that smoking is a metaphor for providing ideas and becoming more productive while working. A study showed that smoking/nicotine dependency was a factor in inducing stress among workers¹⁵. In supporting this, Son et al. (2016) showed similar findings that work-related stress indicates continuity in smoking among smokers, prospectively among the young age group compared to the old age group of smokers¹⁶. Thus, in this sense, Bourdieu's theory in the context of capital provides an argument as habitus of belief as the main core of modus operandi for their continuity in smoking.

Another critical aspect that could explain the perceived advantage of smoking is its attribute to psychological health, including releasing stress and anxiety during work. This ideology has created a culture among smokers to apply smoking as a replacement method to satisfy their needs

and eliminate anxiety during work and study. Conventionally viewed, the element of unexplainable taste of bitterness has been expressed by smokers as acceptable¹⁷. In comparison, smokers in this current study also shared their smoking behavior during the COVID-19 pandemic, when they had more free time and more chances to smoke while working from home¹⁸. Few participants argued that they lost their jobs during the pandemic, and this situation provoked them to smoke more for relaxation and to fill their free time while being restricted at home. These findings are consistent with the previous study by Uppal et al. (2013) the uptake of Stop Smoking Services, designed to assist smokers with quitting, remains low. Little is known about continuing smokers who do not access these services, and opportunities to influence their motivation and encourage quit attempts through the uptake of services. Using PRIME theory, this study explored differences between continuing smokers who had varying levels of motivation to quit, in terms of their plans to quit, evaluative beliefs about smoking, cigarette dependence, and attitudes towards tobacco control policies and services. Methods. Twenty-two current smokers, recruited from the community, were classified by motivation level to quit using a self-report questionnaire (two groups: high/low), which highlighted that smokers' smoking habits are influenced by having free time, boredom, and needing more breaks during working hours¹⁹. In this current study, smokers were aware of the harmful effects of smoking, due to various smoking campaigns implemented in Malaysia for decades. However, because they believe smoking is not harmful, they believe they are in good health. Furthermore, qualitative interviews with smokers revealed that regular exercise improves their health, and does not support smoking as a sensor of their health status. Further argued, this study shows that despite knowing the risks of smoking, adolescents continued to smoke. They rationalised their smoking by disengaging from the risks by ignoring the immediate effects of smoking, ignoring risk information, and normalising

smoking's mortality risk. This finding from this study is also related to previous findings among the population in Kelantan regarding lay belief among smokers, by Jackson et al. (2004). From her study, smokers presented with self-exempting beliefs. Smokers present with the belief that provides an exemption for them to continue smoking, including drinking water, using filters, doing exercise and smoking after eating or drinking²⁰. This finding relates to the current study by smokers showing the same conception for continuity in smoking, by exercising and drinking water as scapegoating for allowing them to continue smoking.

The smokers in this study expressed the need to maintain their health by exercising and adopting a healthy lifestyle without abandoning their smoking habits. It was suggested that exercise increases the desire for smoking due to the increase of beta-endorphin in the central nervous system²¹. This contradicted previous studies that discovered exercising could distract smokers from their urge to smoke²²; hence, their smoking habit can be reduced.

Furthermore, smokers believe their smoking habit certainly has no side effects on their health, and the quitting process should be decided upon by themselves, without the need for consultation²³. This finding is also supported by this current study, which showed smokers are quitting given their conception and willingness, and agree that it is related to health status as part of the requirement for quitting smoking^{24,25}. Furthermore, according to the qualitative results, smokers believe that their health status is not related to their smoking habits and consider other unhealthy lifestyles as the main consequence of their decline in health. This study also revealed that smokers spontaneously went cold turkey after their health became affected.

Limitation of study

It should be emphasised that this study was concerned with understanding smokers' perceptions and

health-seeking behavior. The current findings from this study did not specifically offer a claim for comparison between regions in Malaysia. Moreover, the social aspect and the qualities of the relationship of the smokers from this study sample may differ given the different populations or religious perspectives that may influence them. Furthermore, data from this study was obtained using face-to-face interviews and video calls in view of COVID-19 restrictions. Interviews may capture only part of the reality in terms of the subjective expressions among smokers. This obstacle-related COVID-19 pandemic restriction has limited the full exploration of the capacity of smokers' perception and health-seeking behavior. Hence, the findings only reflect a specific time during the interview session, and the possibility that the smokers' views remained inconsistent over time cannot be ruled out.

Conclusion

This study aimed to explore smokers' health perceptions and their health-seeking behavior. Firstly, it examined how smokers perceive the harmful effects of smoking on their health through the lens of Bourdieu's Theory of Cultural Health Capital. This perspective highlighted challenges for smoking cessation programs and campaigns. Secondly, the study found that smokers often perceive themselves as healthy, leading them to continue smoking despite awareness of its adverse effects. Thirdly, it focused on Malay-populated regions, limiting insights into other ethnic groups' perspectives and their health-seeking behaviors. Notably, data lacked representation from the Chinese and Indian populations. Future research should aim for a more inclusive approach, encompassing all major ethnicities in Malaysia to provide comprehensive insights.

Ethical considerations

The researcher obtained approval from the Kulliyah of Nursing Post Graduate Research Committee (KNPGRC)

and the Ethics Committee of International Islamic University Malaysia (IREC) (ID No: IREC 2020-133). Also, as this study was conducted in HUSM, an official application for approval from The Human Research Ethics Committee of USM (JEPeM) was sought (Study protocol code: USM/JEPeM/20100534).

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Conflict of interest

The authors declare no conflict of interest.

References

1. Kuang Hock L, Hui Li L, Chien Huey T, Yuvaneswary V, Sayan P, Yusoff MFM, et al Support for smoke-free policy among Malaysian adults: findings from a population-based study. *BMJ Open* 2019;9:e020304. doi: 10.1136/bmjopen-2017-020304.
2. Hum WL, Hsien CCM, Nantha YS. A review of smoking research in Malaysia. *Med J Malaysia* 2016;71:29-41.
3. Commar A, Prasad VK, Tursan d'Espaignet E, Wolfenden L, Weltgesundheitsorganisation. WHO global report on trends in prevalence of tobacco smoking 2000-2025. Geneva: WHO: 2018.
4. Lim KH, Teh CH, Pan S, Ling MY, Yusoff MFM, Ghazali SM, et al. Prevalence and factors associated with smoking among adults in Malaysia: findings from the National Health and Morbidity Survey (NHMS) 2015. *Tob Induc Dis* 2018;16:01. doi: 10.18332/tid/82190.
5. Cornelissen S. Turning distaste into taste: context-specific habitus and the practical congruity of culture. *Theory Soc* 2016. doi: 10.1007/s11186-016-9280-0.
6. Sapiro G. Bourdieu, Pierre (1930-2002). In: Wright JD, editor. *International encyclopedia of the social and behavioral sciences*. 2nd ed. Oxford; Elsevier: 2015.
7. Shim JK. Cultural health capital: a theoretical approach to understanding health care interactions and the dynamics of

- unequal treatment. *J Health Soc Behav* 2010;51:1–15. doi: 10.1177/0022146509361185.
8. Vasileiou K, Barnett J, Thorpe S, Young T. Characterising and justifying sample size sufficiency in interview-based studies: systematic analysis of qualitative health research over a 15-year period. *BMC Med Res Methodol* 2018;18:1–18.
 9. Malterud K, Siersma VD, Guassora AD. Sample size in qualitative interview studies: guided by information power. *Qual Health Res* 2016;26:1753–60. doi: 10.1177/1049732315617444.
 10. Mason M. Sample size and saturation in PhD studies using qualitative interviews. *Forum Qual Sozialforsch* 2010. doi:10.17169/fqs-11.3.1428.
 11. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol* 2006;3:77–101. doi: 10.1191/1478088706qp063oa.
 12. Smith J, Firth J. Qualitative data analysis: the framework approach. *Nurse Res* 2011;18:52–62. doi: 10.7748/nr2011.01.18.2.52.c8284.
 13. Seidman I. Interviewing as qualitative research: a guide for researchers in education and the social sciences. 5th ed. New York: Teachers College, Columbia University; 2019.
 14. Costa C, Murphy M. Bourdieu and the application of habitus across the social sciences. In: Costa C, Murphy M, editors. *Bourdieu, habitus and social research: the art of application*. London: Palgrave Macmillan UK; 2015;p.3–17. doi: 10.1057/9781137496928_1.
 15. John U, Riedel J, Rumpf HJ, Hapke U, Meyer C. Associations of perceived work strain with nicotine dependence in a community sample. *Occup Environ Med* 2006;63:207–11. doi: 10.1136/oem.2005.020966.
 16. Son SR, Choe BM, Kim SH, Hong YS, Kim BG. A study on the relationship between job stress and nicotine dependence in Korean workers. *Ann Occup Environ Med* 2016;28:1–9. doi: 10.1186/s40557-016-0113-4.
 17. Buckner JD, Zvolensky MJ, Lewis EM. Smoking and social anxiety: the role of false safety behaviors. *Physiol Behav* 2020;176:139–48. doi: 10.1080/16506073.2019.1696396.
 18. Lam KK, Ho KY, Wu CS, Tong MN, Tang LN, Mak YW. Exploring factors contributing to the smoking behaviour among Hong Kong Chinese young smokers during COVID-19 pandemic: a qualitative study. *Int J Environ Res Public Health* 2022;19:4145. doi: 10.3390/ijerph19074145.
 19. Uppal N, Shahab L, Britton J, Ratschen E. The forgotten smoker: a qualitative study of attitudes towards smoking, quitting, and tobacco control policies among continuing smokers. *BMC Public Health* 2013;13:1–9. doi:10.1186/1471-2458-13-432.
 20. Jackson AA, Manan WA, Gani AS, Carter YH. Lay beliefs about smoking in Kelantan, Malaysia. *Southeast Asian J Trop Med Public Health* 2004;35:756–63.
 21. Ruslan NH, Yasin SM, Mohd Nasir N, Isa MR. The impacts of supervised exercise intervention on tobacco withdrawal symptoms. *Tob Use Insights* 2023;16:1179173X231179811. doi: 10.1177/1179173X231179811.
 22. Abrantes AM, Farris SG, Minami H, Strong DR, Riebe D, Brown RA. Acute effects of aerobic exercise on affect and smoking craving in the weeks before and after a cessation attempt. *nicotine Tob Res* 2018;20:575–82. doi: 10.1093/ntr/ntx104.
 23. Tohid H, Omar K, Muhammad NA, Jaffar A, Md Monoto EM, Mohd Ishak N. Smoking is worth the risk: understanding adolescents' rationalisation of their smoking behaviour. *Pertanika J Soc Sci Humanit* 2016;24:573–85.
 24. Iyas IY, Ashmalia N, Ashraff M. Barriers towards the effectiveness of an anti-smoking campaign program in malacca. *J Educ Soc Sci* 2016;3:99–105.
 25. Li C, Khan MM. Smoking and self-rated health status of older men in China. *Aging Heal Res* 2022;2:100050. doi: 10.1016/j.ahr.2021.100050.