

# Perspectives of Malaysian community pharmacists on challenges and barriers to smoking cessation programme: a qualitative study

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## Abstract

**Objectives:** Smoking remains a significant public health concern, necessitating effective smoking cessation interventions. This study explores the barriers community pharmacists face in delivering smoking cessation services in Malaysia and potential solutions to improve their contribution to public health.

**Methods:** This qualitative study employed purposive and snowball sampling to recruit community pharmacists in Malaysia. Semi-structured interviews were conducted, exploring pharmacists' perspectives on barriers, counselling approaches, follow-up strategies, and opinions on smoking cessation services. Thematic analysis was employed to identify key themes and sub-themes.

**Key findings:** Three main themes emerged from the data analysis: barriers, counselling and enhancing follow-up, and pharmacists' opinions on professional fees. Under the theme of barriers, sub-themes included underutilization by the public, poor follow-up by customers, time constraints, lack of educational materials and support, and customer perception. The counselling and enhancing follow-up theme encompassed shared decision-making, motivational intervention, follow-up via phone calls or messaging apps, and providing rebate vouchers. Pharmacists' opinions on professional fees revealed mixed perspectives, with some advocating for fees to recognize the professional service provided, while others expressed concerns about access barriers.

**Conclusions:** Community pharmacists face challenges in delivering smoking cessation services, such as underutilization, poor follow-up, time constraints, and affordability. However, strategies like shared decision-making and proactive communication can enhance effectiveness. Addressing professional fees and collaborative efforts are essential to optimising these services.

**Keywords:** motivational intervention; shared decision-making; professional fees; smoking cessation; community pharmacists

## Introduction

Smoking is a major contributor to preventable diseases globally, significantly increasing mortality rates, with approximately 1.2 billion smokers worldwide [1, 2]. In Malaysia, tobacco use is responsible for 20,000 deaths annually, and accounts for 15% of hospital admissions and 35% of hospital deaths [3]. This, combined with nicotine addiction, raises healthcare costs and burdens public health services.

Pharmacists, being highly accessible healthcare providers, are well-positioned to offer smoking cessation services. Globally, they are seen as key players in tobacco control initiatives, but face barriers such as limited time, lack of counselling space, insufficient educational materials, and inadequate reimbursement [4, 5]. Although Malaysian pharmacists demonstrate confidence in delivering smoking cessation interventions, a lack of experience and inadequate training often hinders their practice. Additionally, the structural challenges within the healthcare system limit the full potential of pharmacist-led cessation services.

Malaysia has been active in the World Health Organisation Framework Convention on Tobacco Control since 2005 [6].

The National Health Morbidity Survey in 2019 reported that 21.3% of Malaysians aged 15 and above were smokers, with men accounting for a significantly higher percentage (40.5% of men vs. 1.2% of women) [7]. Government strategies, including excise duties, advertising bans, and smoking cessation campaigns, have contributed to a modest decline in the smoker population, from 22.8% in 2015 to 19% in 2023 [8–10].

Despite the availability of government-funded Quit Smoking Clinics, pharmacists in community settings remain underutilized. This study explores the barriers community pharmacists face in delivering smoking cessation services in Malaysia and potential solutions to improve their contribution to public health.

## Methods

### Study design

Telephone interviews were conducted one-on-one using a pre-validated interview guide between June 2021 and January 2022. Community pharmacists were approached targeting those practicing full time within community pharmacy settings in Malaysia. One of the researchers approached them

via telephone, ensuring they met specific eligibility criteria: they had to be fully registered with the Malaysian Pharmacy Board and hold a full-time position. Locum and provisionally registered pharmacists were excluded to ensure data consistency and relevance to the study objectives. Each pharmacist received an information sheet detailing the study's purpose, scope, and confidentiality safeguards. After confirming their eligibility, the researcher invited them to participate voluntarily. Those who expressed interest were provided with additional details, and informed consent forms were emailed for their signature. Participants returned signed forms electronically, affirming their consent to partake in the interview. Recruitment continued iteratively, with interviews analysed concurrently by the researchers to monitor emerging themes and assess data saturation. This iterative process allowed the researchers to identify when no new information was emerging from subsequent interviews, achieving thematic saturation. All pharmacists who had initially agreed to participate were interviewed.

### Interview guide

A semi-structured interview guide was developed by reviewing the literature on smoking cessation by community pharmacists [11–14]. The guide underwent modifications based on feedback from experts in qualitative studies. These experts included academic researchers and professors experienced in qualitative methodologies, particularly in social and health sciences. Open-ended questions favoured to allow the participants ample opportunity to express their opinions and facilitate a deeper understanding of the issues. A pilot interview involving two pharmacists was conducted, leading to refinements in wording the questions. Data from the pilot interview were excluded from the final results.

### Sampling method and sample size

Purposive and snowball sampling methods were employed to select participants, ensuring a diverse range of demographic characteristics including gender, age, and position within the pharmacy setting. Purposive sampling was used to select community pharmacists actively involved in smoking cessation services, identified through professional networks, healthcare organizations, and key regions. Snowball sampling followed, with participants referring others with similar expertise, leveraging local relationships and trust to ensure a broader, representative sample. We aimed to interview 15–16 samples with an estimated interview time of 30 minutes. Sampling continued until data saturation was reached, meaning no new themes emerged from additional data [15].

### Data collection

Data collection involved both verbatim transcription of recorded interviews and the compilation of detailed field notes. Field notes were made by researchers during each interview to capture non-verbal cues, contextual observations, and any immediate reflections on emerging themes. These notes supplemented the audio recordings and provided additional context for subsequent analysis. All interviews were transcribed verbatim by a researcher, with the accuracy of each transcript verified independently by two additional researchers. Finalized transcripts, alongside field notes, were shared with participants for review, allowing them to make any necessary comments or corrections. The completed

transcripts and field notes were securely stored in password-protected Microsoft Office Word documents to ensure confidentiality and data integrity throughout the study.

### Data analysis

Transcribed data were coded and analysed for emergent themes using reflexive thematic analysis, as per the approach and steps recommended by Braun and Clarke [16]. The data were coded and then sorted into categories to develop themes. First, the researchers familiarized themselves with the data, then the initial codes were generated. Followed by identifying, reviewing, defining and naming themes. Finally, the report was produced. The data collection, coding, and interpretation were carried out by a researcher and the resultant data were confirmed by two researchers.

### Data trustworthiness

The Standards for Reporting Qualitative Research (SRQR), a synthesis of recommendations was followed (refer to reporting checklist). Trustworthiness was ensured through several measures in this study. To mitigate researcher bias, a reflective journal was maintained during field notetaking. Participants' characteristics were detailed to enhance data transferability. The sample size was determined based on saturation to ensure completeness and credibility of the content. Additionally, for meaningful analysis, sentences were chosen as the unit of analysis rather than individual letters or words. A clean transcription was completed to maintain readability and address ethical concerns about participants' exact words. Distractions were removed, but the transcripts accurately reflect the recordings.

## Results

In this study, 16 pharmacists were interviewed. Interview durations ranged from 30 to 45 minutes, with all being audio recorded. Saturation was achieved after 12 interviews, with 4 subsequent interviews yielding no new information. No further interviews were conducted, as the data were sufficient to address the research questions.

### Demographic characteristics

The demographic characteristics of participants are shown in Table 1. All participants were aged between 21 and 50, with the majority (62%) aged between 31 and 40. Most of the participants were female (62%) and of Chinese ethnicity (94%). A significant portion of the retail pharmacists (69%) were from Melaka, and the majority (75%) had attended the Certified Smoking Cessation Service Provider (CSCSP) training provided by the Malaysian Pharmacists Society.

### Themes and sub-themes

Table 2 lists the themes and sub-themes. Three themes were derived from the codes: (i) barriers to smoking cessation services, (ii) counselling and enhancing follow-up services provided by the community pharmacists, and (iii) pharmacists' opinions on charging professional fees for this service.

#### Theme 1: Barriers to smoking cessation services

Under this theme, five sub-themes emerged: (i) underutilization by the public, (ii) poor follow-up by customers, (iii) lack of time, (iv) lack of educational materials and support, and (v) customer perception.

**Table 1.** Demographic characteristics.

Characteristics	Number of participants (%)
<b>Age (Year)</b>	
21–30	1 (6)
31–40	10 (62)
41–50	5 (32)
<b>Gender</b>	
Male	6 (38)
Female	10 (62)
<b>Ethnicity</b>	
Chinese	14 (88)
Malay	1 (6)
Indian	1 (6)
<b>Pharmacy location</b>	
Melaka	9 (54)
Selangor	1 (6)
Kuala Lumpur	1 (6)
Penang	2 (12)
Johor	1 (6)
Negeri Sembilan	1 (6)
Perak	1 (6)
<b>Expérience in years</b>	
Less than 5	0
5–10	4 (24)
11–15	12 (76)
More than 15	0
<b>Education</b>	
Undergraduate	16 (100)
Postgraduate	0
<b>Smoking cessation service rendered</b>	
More than once	14 (88)
At least once	2 (12)
Never	0
<b>CSCSP</b>	
Is a CSCSP	12 (76)
Is not a CSCSP	4 (24)

### Underutilization by the public

Most pharmacists mentioned that the public is largely unaware that community pharmacists provide smoking cessation services, leading to underutilization in Malaysia.

‘Very passive, (this service is) under-utilised in community pharmacies. Not many people know seeking this service from a community pharmacist, usually, they just seek for products, then community pharmacist will give counselling’. (CP5)

‘The number of individuals requesting for advice on smoking cessation in community pharmacies is relatively low’. (CP13)

### Poor follow-up by customers

Another challenge identified was poor follow-up. Customers often do not return for subsequent appointments, making it difficult for pharmacists to monitor progress.

**Table 2.** Themes and sub-themes.

Themes	Sub-themes
Barriers to smoking cessation services	Underutilization by the Public Poor follow-up by the customers Lack of time Lack of educational materials and support Customer perception
Counselling and enhancing follow-up	Shared decision-making Motivational intervention Follow up by phone calls/Whatsapp Providing rebate vouchers for follow-up
Pharmacists’ Opinions on Professional Fee	-----

‘Hard to monitor (patient’s progress), (as there is) no appointment for follow up. We can only follow up when they want to top up their (smoking cessation) products’. (CP1)

‘Patients did not attend follow-up services. Since smoking cessation is a free service, some patients do not take it seriously. For example, patients go back and forth on nicotine patches and cigarettes’. (CP3)

### Lack of time

Time constraints were highlighted as one of the main challenges. Community pharmacists often found themselves multitasking, and smoking cessation services were time-consuming, making it difficult to prioritize during busy periods.

‘Challenges at the workplace—no proper counselling room and always crowded during peak hours in the shopping mall’. (CP9)

‘Yes, we avoid whenever we face high load of customers during the day as smoking cessation service need time and follow up’. (CP6)

### Lack of educational materials and support

Pharmacists expressed that there was a lack of educational materials and support from health authorities. Although many had attended CSCSP training, they still needed more resources to fully implement smoking cessation services effectively.

‘It will be good if guidelines or checklist to guide community pharmacists to counsel patients are available’. (CP5)

‘Probably government should compensate us when the patients under our counselling programmes quit smoking successfully’. (CP7)

### Customer perception

Customers’ perception of the high cost of smoking cessation aids, such as nicotine gum and patches, was another barrier.

‘Medicine available in the market is considered pricey’. (CP4)

Many pharmacists noted that patients believed it was cheaper to buy cigarettes than to purchase smoking cessation products.

## Theme 2: Counselling and enhancing follow-up

Four sub-themes emerged under this theme: (i) shared decision-making, (ii) motivational intervention, (iii) follow-up by phone calls/WhatsApp, and (iv) providing rebate vouchers for follow-up.

### Shared decision-making

Pharmacists stated that when patients are involved in making informed choices about their care, they are more likely to adhere to smoking cessation programmes.

‘I’m qualified with CSCSP. I explain various products and the concept of addiction and how the (pharmacological) products work. Sometimes patients experience side effects (from the products) due to wrong techniques. We discuss together and decide the best’. (CP1)

### Motivational intervention

Pharmacists mentioned that motivational counselling played an important role in improving follow-up and enhancing the success of smoking cessation programmes.

‘Usually, I will give them some motivational counselling, more of encouragement and goal planning. I will only recommend products if they need it’. (CP6)

‘It is easier for patients to achieve their goals with proper counselling, guidance and support. Encouragement and follow-up is important. We do the 5A’s’. (CP7)

### Follow-up by phone calls/WhatsApp

Using phone calls or WhatsApp for follow-up was reported as an effective method to help patients adhere to their appointment schedules.

‘We would call or WhatsApp customers to follow up on their smoking cessation progress and send gentle reminders on stock replenishment such as nicotine gums or patches based on their last purchase date’. (CP12)

### Providing rebate vouchers for follow-up

Pharmacists indicated that nicotine replacement therapy (NRT) products were costly, contributing to patients defaulting on follow-up. To address this, some community pharmacies offered promotional discounts and rebate vouchers for smoking cessation products.

‘We have been collaborating with drug companies to promote smoking cessation by offering smoking cessation tools to pharmacists and rebates on products to end users’. (CP15)

## Theme 3: Pharmacists’ opinions on professional fees

Many pharmacists believed that smoking cessation services should carry a professional fee to acknowledge the time and expertise involved. However, some expressed concerns that the public may be unwilling to pay, which could discourage service use.

‘It is hard, as patients won’t be willing to pay extra. It is not possible. By right we are supposed to charge as we are providing our service but it is not possible in Malaysia’. (CP1)

‘I feel the cost of the medication is already costly enough, so let’s not add additional financial burden that will scare them away from getting professional help for smoking cessation’. (CP16)

Some pharmacists recommended charging between RM30-RM40 per counselling session, which typically lasts 15–30 minutes.

## Discussion

This study highlights several key findings regarding the provision of smoking cessation services by community pharmacists in Malaysia. The barriers faced, such as public underutilization, poor follow-up, time constraints, lack of educational materials, and the high cost of NRT, were significant challenges in delivering effective smoking cessation interventions. On the other hand, pharmacists’ counselling practices, shared decision-making, and motivational interventions contributed to the success of these services, despite the challenges posed by limited time and resources. Additionally, mixed opinions on charging professional fees for smoking cessation services reflect ongoing debates about valuing pharmacists’ expertise while ensuring equitable access to care.

One of the key strengths of this research is its comprehensive exploration of both the barriers and facilitators to community pharmacists’ provision of smoking cessation services. The thematic analysis revealed critical issues such as underutilization by the public, poor customer follow-up, and time constraints, offering a nuanced understanding of the challenges faced by pharmacists. Additionally, the study highlighted the lack of educational materials and institutional support, pinpointing areas for improvement in policy and practice. On the positive side, the study also identified effective strategies used by pharmacists, such as shared decision-making, motivational interventions, and the use of follow-up methods (e.g. phone calls and WhatsApp) to enhance patient adherence. The inclusion of pharmacists’ perspectives on the introduction of professional fees for smoking cessation services further enriches the findings, providing insights into the broader debate about valuing pharmacists’ expertise while maintaining equitable access to care. However, some limitations need to be considered. Self-reporting through interviews introduces the possibility of social desirability bias, as pharmacists may have tailored their responses to reflect positively on their practices. This could affect the accuracy of the findings, particularly regarding sensitive issues like time constraints or lack of public engagement.

The findings of this study align with international literature that highlights similar barriers to smoking cessation services across different countries. Public underutilization of pharmacist-led smoking cessation services is a broader issue, frequently reported in studies from other regions. For instance, research conducted in other countries reflected this challenge, where public awareness of pharmacists’ roles in smoking cessation is limited [4, 5]. The lack of collaboration between healthcare providers and community pharmacists is also a persistent issue globally, which reduces the number of referrals pharmacists receive for smoking cessation programmes. Studies from countries like the USA and the UK

have similarly called for stronger integration of pharmacists into healthcare networks to better utilize their skills in smoking cessation interventions [17, 18].

The issue of poor follow-up by customers is another widely recognized problem. Patients often fail to attend follow-up appointments, which negatively impacts the success of smoking cessation programmes. Similar challenges have been observed in other countries, where pharmacists have adopted digital tools, such as mobile apps and text messaging systems, to improve patient adherence [17, 19, 20]. These approaches are becoming increasingly popular in low- and middle-income countries, where mobile health (mHealth) initiatives are seen as cost-effective solutions to enhance patient engagement [21]. Malaysia's high mobile penetration rate offers a prime opportunity to integrate such interventions into pharmacy practice, helping address the issue of poor follow-up.

Time constraints were another significant barrier identified in this study. Pharmacists, often preoccupied with dispensing duties, struggle to allocate time for comprehensive smoking cessation counselling. This finding confirms international research, where community pharmacists report similar difficulties in balancing multiple tasks. A study found that pharmacists faced challenges in providing adequate smoking cessation services due to competing responsibilities [5]. Streamlining workflow processes and developing protocols that allow pharmacists to prioritize smoking cessation during less busy hours could alleviate this issue. Furthermore, collaboration with pharmacy assistants or technicians to manage routine tasks could free up time for pharmacists to focus on smoking cessation counselling.

The lack of educational materials and support from authorities emerged as a critical barrier in this study. Despite having attended the CSCSP training, many pharmacists expressed the need for more resources and ongoing support to enhance their smoking cessation services. Internationally, similar calls for greater institutional support are evident. In countries like the UK, governmental and health authority support has been crucial in standardizing smoking cessation protocols and providing educational resources to community pharmacists [22]. Establishing a more structured support system in Malaysia, including training updates and the provision of printed and digital educational materials, could strengthen pharmacists' capacity to deliver smoking cessation services effectively.

The high cost of smoking cessation products, such as NRT, was identified as another barrier to patient adherence. This finding is consistent with research from other countries, where the expense of NRT products often discourages patients from continuing their treatment [23]. Some pharmacies in Malaysia are already addressing this issue by offering promotional discounts and rebate vouchers, a strategy that could be further expanded. International examples show that subsidizing NRT products or offering financial incentives can improve adherence and increase the success rates of smoking cessation programmes [24].

Pharmacists' counselling practices, particularly the use of shared decision-making and motivational interventions, were highlighted as effective strategies for smoking cessation. These practices align with global best practices, where a combination of counselling and pharmacotherapy is recommended for optimal outcomes in smoking cessation efforts [23]. Pharmacists' role in empowering patients through shared decision-making not only enhances engagement but also promotes long-term commitment to smoking cessation programmes [25].

The mixed responses to the idea of charging professional fees for smoking cessation services reflect an ongoing debate about

the value of pharmacists' time and expertise versus the need for equitable access to services. While some pharmacists supported the imposition of fees to acknowledge the professional effort involved in smoking cessation counselling, others expressed concerns about creating financial barriers for patients, especially those from lower socioeconomic backgrounds. This debate is reflected in other countries, where policy discussions around professional fees for pharmacists often consider both the financial sustainability of the services and the potential implications for public access to care [26, 27].

This study has important implications for policy, practice, and research. Policymakers should consider enhancing public awareness campaigns to promote the role of community pharmacists in smoking cessation. Developing more collaborative frameworks between pharmacists and other healthcare providers could also improve service referrals and integration. In practice, providing pharmacists with additional support, such as educational materials, digital tools for patient follow-up, and subsidized NRT products, could improve the effectiveness of smoking cessation services. Future research should explore the feasibility and impact of implementing professional fees for smoking cessation counselling, while also considering strategies to ensure services remain accessible to all segments of the population.

## Conclusions

This study explains the significant challenges faced by community pharmacists in delivering effective smoking cessation services in Malaysia, including public underutilization, poor patient follow-up, time constraints, and the high cost of cessation products. The findings highlight the necessity of improving public awareness and collaboration among healthcare providers to enhance service utilization. Additionally, effective counselling strategies, such as shared decision-making and motivational interventions, were identified as crucial for engaging patients in their cessation journeys. The exploration of professional fees for smoking cessation services highlights the need to balance the recognition of pharmacists' expertise with ensuring equitable access to care, particularly for economically disadvantaged populations. This research contributes by providing a comprehensive understanding of the barriers and facilitators affecting pharmacist-led smoking cessation efforts, thereby informing policy and practice. Ultimately, fostering collaboration between healthcare authorities, professional organizations, and community pharmacies is essential for optimizing smoking cessation services and mitigating tobacco-related diseases in Malaysia. By addressing these issues, the study overlays the way for more effective and sustainable smoking cessation initiatives within the community pharmacy framework, enhancing public health outcomes.

## Author contributions

Conceptualization, M.K.M. and K.R.; methodology, K.R.; software, E.L.L.; validation, M.K.M. and K.R.; formal analysis, E.L.L.; investigation, E.L.L.; resources, E.L.L.; data curation, E.L.L.; Writing—original draft preparation, E.L.L.; writing—review and editing, M.K.M. and K.R.; visualization, M.K.M. and K.R.; supervision, M.K.M. and K.R.; project administration, E.L.L.; funding acquisition, K.R. All authors have read and agreed to the published version of the manuscript.

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## Ethical approval

The study was approved by the IMU Joint Committee on Research and Ethics (MPP I-2021(01)).

## Data availability

All data are incorporated into the article. All data supporting this study are provided in full in the 'Results' section of this paper.

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