

Consumers' perspective on overview of zoning policy in community pharmacy: A qualitative study in Malaysia

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ABSTRACT

This study aims to assess in depth opinion of consumers regarding zoning of community pharmacies. A semi-structured qualitative study utilising face-to-face interviews were carried out with 10 consumers aged 27 to 48 years old in Penang, Malaysia. Purposive sampling was employed, and data collection was stopped when the saturation point was reached. The interviews were audio-recorded and transcribed verbatim. The transcripts were independently coded and verified by experts with the resultant data analysed by ATLAS.ti version 8 using thematic analysis. The consumers found to have lack of exposure to the concept of zoning policy. They were aware about the oversaturation of pharmacies in urban areas as compared to rural areas. The consumers believed that many pharmacists refused to establish their stores in rural areas because of hard to survive in business. Some consumers viewed zoning policy as having advantages of improving accessibility of healthcare in rural areas and enhancing professional pharmacy services. Nevertheless, the consumers expressed worries in the possibility of pharmacy monopoly after implementation of zoning policy in certain areas which could leads to reduce product variety and increased price. Considering the strategies of implementing zoning, some consumers advocated incentives given by government to support rural pharmacies and setting policy of new pharmacy entry in urban area. In conclusion, the Malaysian consumers need to have more exposure to the concept of zoning in order to gain their support on the future implementation of the policy.



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1. Introduction

Zoning law is applicable to relocation of existing community pharmacies or new pharmacies allocation. Zoning in community pharmacies has been widely practiced in many countries with the aims of ensuring equal accessibility of pharmacy services regardless rural and urban area [1- 3]. For instance, in Australia, a

newly opened community pharmacy or relocation of an existing pharmacy must apply to the Secretary of the Department of Health to seek approval [4]. In Malaysia, the Community Pharmacy Benchmarking Guidelines 2011 and 2015 recommended that new pharmacies should be located at an appropriate distance from existing pharmacies [5]. However, the community pharmacy zoning policy have been discussed for many years but yet to be implemented in Malaysia [6].

The absence of zoning policy could cause uneven distribution of community pharmacy. Currently in Malaysia, there are instances of new community pharmacy in urban area opening close to the existing ones. Meanwhile, there is a lack of pharmacies in rural area. Community pharmacists play an essential role in providing pharmaceutical care services for the purpose of improving consumers' quality of life [7]. Therefore, the location and accessibility of community pharmacy services is an important determinant of health care access [8]. The concern on an inequitable distribution of community pharmacies among rural and urban areas has been raised since 2012 by the former Health Minister of Malaysia. Majority of pharmacies in Malaysia were saturated at more urbanized states and territory such as Kuala Lumpur (6,205 peoples per pharmacy), Penang (7,749 people per pharmacy) and Malacca (9,695 people per pharmacy) in West Malaysia. Meanwhile, there was generally lower accessibility of pharmacies in less developed states such as Sabah (22,433 people per pharmacy) in East Malaysia [9].

The uncontrolled oversaturation of pharmacies in urban area is a challenge for the community pharmacy practices in Malaysia. The increased saturation of new pharmacies in the urban area has indulged in a medicine prices competition and pharmacies need to undercut the market prices in order to gain a foothold in the sector [10]. Besides, the absence of medicine prices control policy in Malaysia further enhanced the prices competition between pharmacies, subsequently reduced the pharmacy mark-ups and incomes. The community pharmacists need to spend more times in competing to survive in business, rather than concentrate on promoting public health [11]. The business aspect of community pharmacy had overwhelmed the professional practice aspects [13] and neither the consumers nor pharmacists are focusing on professional pharmaceutical services. The implementation of pharmacy zoning policy is one of the strategies to address this problem. As the main stakeholder in the healthcare system, the consumers' opinion in pharmacy zoning is very important with regards to the accomplishment of this policy. Thus, this study aims to explore in dept opinion of Malaysian consumers about zoning of community pharmacies. Prior to present time, no related study has been conducted in Malaysia in the issue of pharmacy zoning. Therefore, the findings from this study would help the Malaysian government in designing the zoning policy.

2. Material and methods

2.1 Participants

This was a qualitative study involved semi-structured interview. Participants were consumers in Penang state, Malaysia selected by purposive sampling. The inclusion criteria for the consumers were any Malaysian adult aged more than 18 years. The consumers were literate in either Malay, English or Chinese language. The sample size depends on the occurrence of saturation point at which no new data appeared from the interview [14].

2.2 Instruments

A semi-structured interview guide (Table 1) was firstly developed from an extensive literature search. The interview guide has gone through face and content validation by three experts from School of Pharmaceutical Sciences, Universiti Sains Malaysia and three consumers in Penang. The guide for consumers' interview was initially developed in English and subsequently translated to Chinese and Malay

language by using forward and backward translation procedure. Periodic interim analyses of the collected data were performed, leading to revisions of the semi-structured interview guide to facilitate the subsequent interviews and enhance the richness of the data.

Table 1. Semi-structured interview guide for consumers

No.	Key Questions
1	Have you heard of zoning of community pharmacies?
2	What do you understand about zoning?
3	What is your opinion towards the location and saturation of community pharmacies in your area?
4	Do you agree with the implementation of zoning in Malaysia?
5	In your opinion, how much distance should be between two community pharmacy premises (in different area)?
6	What is the best time frame (within how many years) to implement the zoning policy?
7	Do you think with the implementation of zoning, it can help to reduce the price of the medications and other items sold in the community pharmacy?
8	Should the zoning policy be implemented on the new or existing community pharmacies?
9	Do you think the implementation of zoning can help to reduce the competition among the community pharmacies?
10	Do you think the implementation of zoning can improve the professional pharmacy practices?
11	What do you think on other benefits by implementation of zoning in pharmacies (other than number 9 & 10)?
12	Do you think that implementation of zoning bring benefits to the consumers?
13	Do you think that the implementation of zoning brings benefits to economy?
14	What are potential disadvantages of zoning in pharmacy?
15	Do you think new pharmacies are willing to open in rural areas?
16	What are the challenges for opening new pharmacies in rural areas?
17	What actions can be done by the government/policy maker to encourage new pharmacies to open in rural areas?
18	How far are you willing to travel to get to the nearest pharmacy from your home?

2.3 Procedure

The interview of consumers was carried out solely by the first author from January to March 2021. The interviews were conducted either through face-to-face with the venue determined by the participants or synchronized by using Google Meet due to the COVID-19 pandemic season. The prospective respondents were initially contacted through phone call to obtain consent and made appointment prior to the interview. The interview was lasted for approximately 10 to 30 minutes. The language for the interview was selected based on the preference of the respondents. All interviews were audio-recorded and subsequently transcribed verbatim by the first author. A random selection of transcripts was checked for accuracy by another researcher and no significant discrepancy was detected. The transcripts were subsequently returned to respondents for comments and corrections.

2.4 Data analysis

The transcribed data were coded and analysed by using ATLAS.ti version 8, for emergent themes using thematic analysis as recommended by Braun and Clarke [15]. The analysis involves the constantly searching across a data to find repeated patterns of meaning [15].

2.5 Ethical consideration

This study granted ethic approval from The Human Research Ethics Committee of *Universiti Sains Malaysia* (Ethics approval number: KKM/NIHSEC/P20-913).

3. Results

A total of 10 interviews (con 1- con 10) with consumers aged 27 to 48 years old in Penang were successfully completed. From the 16 consumers approached, six consumers rejected to participate in this study. Data collection was terminated after data saturation had been reached, as no new information were forthcoming from the interviews. Demographic characteristics of the respondents were shown in table 2.

Table 2. Demographics and characteristics of the responding consumers.

Characteristic	Frequency
Gender	
Male	6
Female	4
Age (years)	
21-30	2
31-40	5
41-50	2
51-60	1
Ethnicity	
Chinese	9
Indian	1
Residential area	
Rural	2
Urban	8
Educational background	
Diploma	1
Degree	8
Postgraduate	1
Employment status	
Self employed	3
Public sector	2
Private sector	5
Income status	
Above RM 3000	9
Above RM 2000-3000	1
How frequent do you visit the community pharmacies for medication supply	
Once per two weeks	2
Once per month	4
Occasionally once per month	3
When needed	1
How many community pharmacies within 1 km from your home?	
0	3
1	2
2	2
3	2
4	1

A total of five themes for consumers' interview were identified from thematic content analysis of the

interviews.

Theme 1: Understanding of zoning

Only a few respondents have ever heard of zoning in pharmacies. Some of the respondents understood that the zoning policy aims to distance saturated pharmacies apart:

“One place has only one pharmacy.” (con 1)

The respondents correctly recognised that the purpose of zoning is to increase healthcare accessibility in rural area:

“(Zoning) is to get the familiarization and ease of citizen to assess the pharmacy... regardless urban or outskirts.” (con 2)

“The consumers (in rural areas) are able to access the pharmacies and obtain (pharmaceutical services) from the nearest (pharmacy).” (con 3)

Theme 2: Current saturation of pharmacies

A few respondents noticed that saturation of community pharmacies only occurred in urban area:

“Basically, (pharmacy) is saturated at certain location (in urban areas), so it is not so convenient (for consumers).” (con 7)

“I think within the 1-2 km (in urban area) you can simply spot 2-3 pharmacies, sometimes they just open next to each other.” (con 5)

Theme 3: Challenges of pharmacies in rural area

The respondents perceived few reasons for pharmacists’ reluctance to open their community pharmacies in rural area. For instance, the pharmacists in rural areas need to put in more efforts to educate the rural residents.

“Well, a lot of people (in rural areas) who are less educated may rely on hearsay. So, pharmacist who are stationed there have to be prepared to guide these people probably.” (con 4)

Some respondents expected a lower business transaction in rural pharmacies due to lower buying power among the rural residents:

“Maybe they (the rural residents) have different social economy status (which is) lower. They might not be afforded to go outside to buy (medicines). Maybe they are rely on government (healthcare facilities).” (con 9)

“...most likely they (rural residents) will go to klinik daerah (government district clinic). They might not be able to spend in pharmacies.” (con 7)

Additionally, the lower population in rural area was viewed as another factor of lesser business transaction in rural pharmacies by the respondents:

“Population is really low. Then, I don’t think there are pharmacists that would like to set up the pharmacies at that rural area” (con 6)

Rural areas are lacking roads which connecting to every places. Thus, some respondents expressed concern about the inaccessibility of rural residents, sales representative, as well as higher delivery cost of medicines to the community pharmacies:

“Transportation cost (for medicine delivery) will be also higher, and it could be a little bit inconvenient for the sales rep to stock up (for pharmacies in rural area).” (con 5)

“In rural area, usually the population is either under 18 or above 70 (years old). They are bedridden or elderly who cannot move, unable to have transportation to reach the pharmacies.” (con 3)

Theme 4: Impact (advantages/ disadvantages) of zoning in pharmacies

The respondents worried that lesser pharmacies, stocks and variety of products will be available after the

implementation of zoning policy as compared to before the zoning:

“Likes previously (before zoning), there are a lot of pharmacy choices” (con 9)

“If we fix the quantity of pharmacies in one zone, this may limit the opportunity for the citizen to get the better competitive products in price, and the variety of products (and) services” (con 2)

Some of the respondents complained that they might need to travel in long distance in order to compare the prices or brands of the pharmaceutical products:

“If the area only have one or two pharmacies, you have to drive for another two or three kilometers away to get check up with another pharmacies for their price.” (con 4)

“I felt likes if I goes to my location (without zoning), I have more pharmacies (choices). I can do comparison of the product prices or branding.” (con 4)

One of the respondents predicted increased price after the zoning policy implementation. However, it is deserved when the accessibility of pharmacies have improved:

“Probably (after zoning), the pharmacies can sell extra one to two Ringgit Malaysia. This is normal, because the pharmacy serve you at the convenient place (and) you don’t have to travel far.”

The respondents foreseen that the competition between the pharmacies will be reduced after zoning. However, the respondents believed that the reduction in competition might compromise the quality of pharmacy services:

“Yes, (the competition reduced after zoning). But, I don’t think this (reduction in competition) is good for consumer.” (con 1)

“I think competition is the one that will increase the (quality of) services.” (con 4)

Meanwhile, another respondent expressed different opinion that the pharmacies competition will be remained after the zoning implementation:

“The pharmacy will try to attract someone (consumer) out of the zone to buy something. So, eventually the competition will be there.” (con 7)

Meanwhile, a respondent perceived that the pharmacy professional services will be improved after the zoning implementation, as the pharmacists will switch the focus from business competition to professional services:

“...instead of just selling cheaper medicine, they (pharmacists) can concentrate on the professional kind of advice. I guess.” (con 8)

Additionally, a respondent believed that the consumers will divert their price concern to professional pharmacy services:

“Consumers may change a bit of their mindset, rather than they will treat pharmacies like a high-class sundry shop.” (con 6)

A few respondents were concerned about the pharmacy monopoly which might happen after zoning implementation:

“No more competition between the pharmacies, right? So, definitely they (pharmacies) will conquer the whole market at that area.” (con 8)

“If the pharmacist thinks that I (am the) only pharmacy here. So, all the consumers will come to buy things from my shop. I have monopoly this area.” (con 1) “A big player (likes chain pharmacy) will monopolize the market.” (con 2)

A few respondents perceived that zoning of community pharmacies has against the free market competition in Malaysia:

“I would say that the pharmacies are subjected to open market. We should not limit how much distances pharmacies should have.” (con 2)

“Malaysia has competition law. This (zoning policy) is anti-competition.” (con 4)

Some respondents foreseen that pharmacists may tend to establish online pharmacy rather than physical outlets due to the impact of zoning:

“...even if you zone it, the new businesses (pharmacies) wouldn't bother to open in physical store. For those people who cannot access to online, this may draw them away from pharmacy services.” (con 4)

Thus, some respondents perceived zoning has lack of impact on pharmacy accessibility in the current internet-era, as the consumers can purchase pharmaceutical products through online shop:

“I would recommend opening online shop for pharmacies. So, it breaks the barrier of rural and urban area.” (con 2)

“We even have online consultation with the pharmacist.” (con 5)

Theme 5: Strategies to help the implementation of zoning in pharmacies

Generally, the respondents proposed a few strategies to encourage the establishment of new pharmacies in rural areas.

A few respondents advocated some incentive funding and tax reduction by government to reduce burden of rural pharmacies:

“...the government can give some incentive, better rebate or reduce the tax to encourage them to open in the rural area.” (con 5)

“The best thing is subsidize pharmacies which just started in rural area which buying power is lesser.” (con 8)

“Government may need to have certain subsidy to pharmacies in the rural area.” (con 6)

The respondent perceived policy makers should limit the entry of new chain pharmacy into urban area and the chain pharmacy should start up their pharmacy in rural area:

“If they (large chain pharmacies) want to get license in urban area, there should be a government policy to restrict them and require large chain pharmacy to open a pharmacy in rural area.” (con 2)

4. Discussion

The idea of zoning is to prevent new community pharmacies opening in close proximity to an existing pharmacy [10] especially in urban area [16]. The present study found that there was a lack of exposure to the concept and purpose of zoning policy among the consumers. The consumers' understanding of zoning is important in gaining their support in the implementation of zoning policy. There is an urgent need for educational intervention to enhance the understanding and acceptance among the Malaysian consumers towards the zoning of community pharmacies. Messages on the benefits of zoning policy should be delivered to the consumers.

The respondents expressed opinion that the community pharmacies were more saturated in urban areas compared to suburban and rural areas. A previous study in Malaysia showed that the numbers of community pharmacies were lacking in less developed states but certain urbanized states and territory have very dense numbers of community pharmacies [9]. Indeed, in some urban places, three to four community pharmacies are located at one single street [17]. Similar trend of uneven distribution of community pharmacies was shown in other country. For instance, 19% of the population in rural areas of Greater Toronto, Canada were under-serviced with very poor geographic access to community pharmacies (pharmacies to residents ratio of 1: 5,882), compared to 29.6% that are well- or over-serviced in urban areas (pharmacies to residents ratio of 1: 3,571) [18]. Thus, zoning is important to be enforced in urban areas with high saturation of pharmacies and to ensure accessibility of pharmacies in rural areas.

Concerns on barriers for implementation of zoning policy were found among the responding consumers. The respondents commented that the pharmacists might be reluctant to establish their retail business in rural area due to a few challenges. Lower health awareness of rural residents is among the challenges. The

pharmacists need to spend more time and effort in creating health awareness among rural residents. Nevertheless, in Malaysia, the community pharmacists generally do not impose consultation fees for their advice to the consumers [19]. A previous survey in Western China found that lower education level caused poor health awareness among rural residents as compared to urban area. Additionally, the rural residents preferred simple and traditional way in receiving health knowledge [20]. A study in Australia indeed showed that the rural residents tend to consulted more and talked longer with the pharmacist than in urban areas [21]. A study from Dakota, United States also found that rural pharmacists have more frequent delivery of public health services such as medication therapy management as compared to urban area [22]. Therefore, government's reimbursement on pharmaceutical consultation delivery is worthy to encourage pharmacists to open their retail stores in rural areas.

The respondents viewed lower daily business transaction as another challenge of establishing community pharmacies in rural area. This is because of the relatively lower population, standards of living and purchasing power of rural residents [23] particularly among the elderly [2]. Poverty is the reason of the rural residents to rely on the government clinic for getting the subsidized medications rather than visit to the private pharmacies. Lower population density [24] and social economy status in rural area led to lesser daily business transaction in private pharmacies. This could eventually affect the profit and sustainability of rural pharmacies. The government should arrange strategies to help in the sustainability of rural pharmacies.

Poor road conditions and transportation in rural areas were viewed by the respondents as obstacles to the development of rural community pharmacies. For examples, many villages remain isolated from urban centers or from a highway of good quality [25]. This factor could cause inconvenient of sales representative to visit the rural pharmacies. Higher cost of stocks transportation and longer delivery time to the rural areas often occurred. A previous study from United State revealed that the rural pharmacists viewed both distance and limited access to transportation as access barriers more than the urban counterpart [26]. Thus, pharmaceutical companies and suppliers preferred rural pharmacies to purchase larger stock quantities to offset the transportation costs [10]. This in return would cause financial burden to the rural pharmacies. The government may help in this aspect by developing routes connectivity between rural and urban areas. Besides, provide subsidization in transportation cost of rural pharmacies is another good strategy.

The respondents agreed that zoning in pharmacies has its impact of pros and cons. One of the advantages highlighted by the respondents is the improvement in quality of professional pharmacy services. Zoning can help in reduction of price competition and the consumers can therefore switch their focus from medicine prices to professional pharmacy services. Aggressive competition occurred in areas with high saturation of community pharmacies and caused intense market price competition. A previous qualitative study revealed that price competition had detrimental effect on the professionalism of community pharmacy practice in Malaysia [27]. Community pharmacists with over emphasized on price competition often disregards the quality of pharmacy services [28]. Price competition caused pharmacists spent lots of their time in adjusting the selling price of their pharmacy products to attract the consumers. Consequently, the pharmacists might neglect the important role in providing professional services. Additionally, profit margin from the sales of pharmacy products is the main income for community pharmacies in Malaysia as the consultation and dispensing fee is waived in Malaysia with the absence of dispensing separation policy [13]. Thus, the limited sources of income likely distracted the pharmacists to provide pharmacy consultation. A qualitative study among community pharmacists in Sarawak, Malaysia found that most of the respondents (98.8%) were aware of health promotion as part of the pharmacist's responsibility. However, the responding pharmacists complained lack of time and lack of profitability are the barriers limiting community pharmacists from involving in health promotion activities [12]. Therefore, medicines price control

regulation is one of the ways to address this issue. Besides, developed countries such as Australia, Canada and United States have implemented zoning policy, and this could help in release the high competition between pharmacies [28].

Zoning in community pharmacies has its disadvantages as mentioned by respondents in this study. The respondents expressed concern that monopoly of certain pharmacies might happen due to zoning. Indeed, a previous study had showed the relation between the pharmacy competition, monopoly, and increment in market price [29]. Zoning policy would restrict the number of pharmacies in certain area. The improper allocation of large chain pharmacies in high profitable urban area with less competitors might possibly increase their monopoly power in the market [29]. This could eventually increase the market price in the areas which dominated by the large chain pharmacies. The zoning policy should be implemented cautiously to avoid the above-mentioned problem.

The respondents viewed zoning as might have negative impact of reducing overall number of community pharmacies. The pharmacists might start online pharmacies rather than opening a physical store when their intended location is restricted under zoning policy. Online ordering is emerging as the most viable solution to health care delivery nowadays [26]. Such methods would serve not only rural residents but also those who are unable to travel [28]. Nevertheless, online pharmacy might cause inconvenient to rural residents who have poor internet accessibility. Indeed, some studies showed that elderly living in rural areas have contributed to the digital divide, as there was a wide gap in adoption of technology between older adults living in rural versus urban areas [30- 33]. This is further aggravated by low territorial coverage in internet access in rural areas [34]. Hence, during the implementation of zoning policy, the government need to ensure the number of physical pharmacies is sufficient to cater the needs of public.

In view of the barriers in zoning policy implementation, the respondents suggested a few strategies to address the problems. The respondents urged government to consider some strategies such as reviewing pharmacies' rural incentives to encourage the pharmacists to start up their business in rural areas. A qualitative study in South Africa showed that the government could provide incentives, such as minimal rent in a government building or priority for contract renewal for rural pharmacies [35]. In Columbia, incentive is provided to pharmacies which fulfilled the criteria of sole pharmacy store in the community and the next nearest pharmacy is at least 25 km away [36]. Other incentive strategy such as revolving drug funds was implemented in Kyrgyzstan, whereby an initial capital was invested by Ministry of Health for the purchase of medicines in new rural pharmacies [37].

There was another strategy suggested by the respondents to reduce saturation of pharmacies in urban area while minimize the risk of monopoly. The government could review licensing criteria to limit entry of pharmacies in high saturation areas. In many European countries, entry in the pharmacy market is restricted based on demographic criteria (e.g., minimum number of inhabitants that will be supplied by one pharmacy) and/or geographic criteria (e.g., minimum distance to existing pharmacies) to ensure a required minimum revenue for existing pharmacies in their local markets. In Germany, the government only allow approbated pharmacists to own a strictly limited number of pharmacies to avoid the possibility of monopoly in zoning [38]. The main idea of the regulation of an upper limit number of pharmacies is to prevent the formation of pharmacy chains that could be dominated by external investors, for instance, large companies from pharmaceutical industry. This strategy could limit the overgrowth of pharmacies in urban area and encourage the establishment of branches in less profitable rural areas [38]. The respondents from this study have similar suggestion of setting criteria of new pharmacies entry in urban area to control monopoly issue and simultaneously encourage opening of rural chain pharmacy.

5. Conclusion

The responding consumers have lack of exposure to the zoning concept in community pharmacies. The consumers were aware of the inequal distribution of community pharmacies with oversaturation in urban areas of Malaysia. Nevertheless, the consumers agreed that there are barriers for establishing community pharmacies in rural areas. Educational interventions are required to enhance the Malaysian consumers' exposure and understanding of the zoning policy in order to gain their supports in the future establishment of the policy.

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