ORIGINAL ARTICLE

Public's Preferences for Community Pharmacy Attributes and Their Perceptions Towards Pharmacist-led Minor Ailment Services in Malaysia

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ABSTRACT

Introduction: The prospect of public accessing community pharmacies for minor ailment advice or treatment highly depends on the pharmacy attributes and their staff. This study aimed to investigate the extent to which community pharmacies are used as a source of minor illness management and the public's relative preferences for pharmacy features. **Methods:** A cross-sectional survey among the public in Malaysia was carried out between August and December 2020. The validated self-administered questionnaires were distributed at several pharmacies and shared via email, Whatsapp group, and Facebook. **Results:** A total of 141 from 153 public respondents completed the survey. From the descriptive and inferential analysis, it was found that about a third of the public goes to a pharmacy for advice or treatment for minor illnesses. The vast majority of respondents had positive perceptions that community pharmacists are knowledgeable and qualified to offer advice or treatment for minor diseases. A significant positive relationship was observed between pharmacy characteristics' scores and pharmacy staff and pharmacy services' scores ($p<0.001$). The increase in pharmacy staff score significantly increased the pharmacy services' score ($p<0.001$). **Conclusion:** The implications of the public acknowledging specific attributes were crucial in further supporting community pharmacists' services, especially in the private practice setting.
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INTRODUCTION

Community pharmacists (CPs) are one of the most accessible healthcare professionals, providing a resource for people seeking treatment and guidance for various minor conditions (1). According to studies, about 84 percent of pharmacy users visit community pharmacies regularly to get treatment for minor health issues. Pharmacy provides less costly consultations for minor ailments compared to general practitioners and favourable health related outcomes to the public. About half of the respondents perceived community pharmacists were health professionals who balanced well between health and business concerns (2, 5).

Community pharmacies are being used over general practitioners (GPs) due to their easy access and convenience in managing minor ailments (3), for example, the United Kingdom Pharmacy-based minor ailment schemes (PMASs) by National Health Service (NHS). The public can seek treatment and/or advice from their pharmacist for minor ailments, e.g. cold and flu, and if necessary, pharmacists make an appropriate referral to other healthcare professionals for more serious illnesses. (4). In addition, with the diversion of care of minor ailments to the CPs, GPs could focus on more complex cases (5).

However, several researchers found that the public is skeptical about community pharmacies as a source of minor illness care (6). It's unclear why community pharmacies aren't used more frequently to treat mild ailments. The attributes of pharmacies and their staff may increase public utilization of pharmacy services (6). Previous research (7) on community pharmacy use and preferences for managing minor ailments reveals that various factors influence community pharmacy utilization. Some are user factors (e.g., age, gender, symptom nature, prior experience), whereas others are pharmacy service attributes.

Another study in the United Kingdom used a discrete choice experiment (DCE) to examine the general public's relative preferences for community pharmacy attributes (6). People's decisions regarding which pharmacy to

visit for treatment and guidance for minor ailments may be influenced by the characteristics of a community pharmacy and its employees. The findings of this study shows that attributes of community pharmacies and their personnel, such as pharmacy location, parking accessibility, staff attitude, and waiting time, may have an impact on the uptake of services for the treatment of minor diseases. Those who adhere more closely to the type of service most highly praised by respondents in this DCE, i.e. pharmacy service that would improve the public's understanding and management of symptoms are more likely to urge consumers to utilize their pharmacy for minor ailments.

In England, a cross-sectional survey was conducted to investigate the use of community pharmacies by people with long-term respiratory disorders (8). According to this study, patients were more willing to utilize community pharmacies for medicine management and minor ailments. Still, they were less willing to use them for diagnostic services and drug consultations. If pharmacy personnel offered services or their GP referred them, respondents would be more likely to use community pharmacies for healthcare (44%). This is similar to the study done among community pharmacists in Malaysia who perceive that the shifting of minor ailment services to the pharmacist needs support from general practitioners and making dispensing separation available for the practice to change in which the public may benefit from minor ailment management (9).

This study aims to evaluate the extent of utilization of community pharmacy services by the public in minor ailment management. The study's specific objectives are to determine the public's perceptions of community pharmacists in the management of minor ailments, to identify the public's relative preferences for community pharmacy attributes, and to determine the demographic characteristics of respondents that may be associated with their preferences for pharmacy attributes in minor ailment management. The study was approved by Monash University Human Research Ethics Committee (MUHREC) (Project ID number: 23869).

MATERIALS AND METHODS

The estimated sample size for this study is 384. Sample size was calculated using the Raosoft sample size calculator. The margin of error is set at 5% with confidence intervals of 95%. The response distribution is set at 50%.

A convenience sample strategy was used to perform this cross-sectional study. The study was conducted in the Klang Valley, Malaysia, for four months in 2020 using a validated self-administered questionnaire among the public. The public was approached to complete the questionnaire via google forms online or paper based questionnaires at several pharmacies. The questionnaire link was also shared in public domain group chats, e.g., Facebook and Watsapp. The public who consented to their participation were adults above 18 years old, Malaysian citizens, and comprehend written or spoken English.

The questionnaire was an adaptation of a previous survey tool used in a similar setting for community pharmacists and the public (6), but for this study, several sections on perception were added from a literature review of relevant studies. The questionnaire consisted of four sections that obtained data on; 1) demographic characteristics including age, gender, ethnicity, education level, health status, and household income 2) common minor illnesses that they seek advice and treatment from the community pharmacies 3) publics' perceived agreement on the role of community pharmacists' managing minor illness, and 4) attributes influencing the publics' likelihood of accepting community pharmacies service for managing minor illness (Appendix 1). This survey used a 5-point Likert scale ranging from strongly disagree to strongly agree. For each statement, the scale was given one mark score added for more positive agreement; 'strongly disagree' received scoring 1, 'disagree' received scoring 2, 'neutral' received scoring 3, 'agree' received scoring 4, and 'strongly agree' received scoring 5. The negative statements applied reverse scoring. The total of high scores for that section indicated good perception or agreement.

Validity and reliability of the questionnaire

This study applied a Delphi method (10) to obtain consensus on the content and construct validity of survey questions for each section. A panel of experts consisting of nine healthcare professionals with vast experience in pharmacy practice discussed the appropriateness of the questions via email. Using a 7-point Likert scale, the panel of experts was asked to rank the level of relevance for each question (e.g., 1: not at all relevant and 7: extremely relevant). If less than 80% of agreements were not met, the panel was asked to justify their rank choice. Several questions were removed for ranks below 4. After three rounds of discussion, an agreement; content validity index CVI (>0.78) of the 42 items' questionnaire was achieved. Inter-rater reliability (IRR) of >80% and intra-class correlation coefficient (ICC) in a 2-way mixed model (fixed raters) with absolute agreement > 0.7 indicated moderate to good reliability. Further on, the questionnaire achieved internal consistency of items with Cronbach alpha values of (>0.9) for each section.

Statistical analysis

A descriptive analysis was applied on the publics' responses to community pharmacy service for minor ailment management and attributes influencing their likelihood of using community pharmacy services. A multivariable regression analysis was used to look at the characteristics of respondents that might be associated with their preferences for pharmacy attributes in minor

ailment therapy. A P value of <0.05 was considered significant. All statistical analysis in this study was done using IBM® Statistical Package for Social Science (SPPS) version 24.0.

RESULTS

The survey was distributed to 153 public participants, but only 141 of them responded and completed it, yielding a response rate of 92%. There were 92 females (65.2%) and 49 male respondents in the group (34.8 percent). The majority of the participants were a mix of various ethnicities and aged less than 35 years (n=112, 79.4%). Most respondents had tertiary education (n=112, 86.5%) compared to those with secondary and lower education (n=19, 13.5%). A majority of the respondents were employed (56.5%), whereby 41.1% of them work in the private sector followed by self-employment (n=41, 29.1%) and working in the government sector (n=36, 25.5%). But, the average income was below RM1000 (n=70, 49.6%). The majority of the public respondents have reported being in good health (n=55, 39.0%) and visited pharmacies every two to three months (n=65, 46.1%). The summary of respondents' socio-demographic and characteristics are presented in Table I.

The most common reason public respondents visit a community pharmacy was to purchase vitamins or supplements, 48.3% (n=68) and to purchase or to obtain advice on prescription and non-prescription medicines, 37.6% (n=53) (Table II). About 36.9% (n=52) of them commonly visit community pharmacies to get advice or treatment for minor ailments or illnesses. The least common reason for the public to visit a community pharmacy was acquiring advice on general health or illness diagnosis, 63.1% (n=89), and purchasing home diagnostic devices, 53.2% (n=75). Whereas the common reasons they sought advice and treatment from the pharmacist were for body ache and pain (47.6%, n=67), upper respiratory tract infections (41.8%, n=59), and mouth and throat conditions (36.2%, n=51) (Table III). Meanwhile, head lice (68.8%, n=97) and ear-related conditions (66.7%, n=94) were the least minor ailments sought at the pharmacy.

The majority of respondents in this study 'strongly agreed' and 'agreed' that community pharmacists have the knowledge to provide advice on general health issues, such as minor ailments, and to assist patients in better understanding their symptoms (Table IV). They also 'strongly agreed' and 'agreed' that the pharmacists were qualified to provide treatment for minor illnesses and refer to a doctor when necessary. However, about 35.5% were neutral about community pharmacists allowing patients access to an extended range of medications for minor ailments in a community pharmacy setting.

Meanwhile, the median score of pharmacy characteristics was 30 (Mdn =30, IQR = 7.0). The majority of the respondents 'strongly agreed' and 'agreed' that the pharmacy premise being tidy and clean was an important attribute contributing to the likelihood of them visiting the pharmacy for minor ailment service or treatment (Table V). Apart from that, the convenient location of the pharmacy, which was close to work or home, the opening of the pharmacy in the evening or on weekends, and the clear display of medicines and

Table I: Summary of public's demographic and characteristics (n=141)

Variables		n (%)
Gender		
	Male	49 (34.8)
	Female	92 (65.2)
Age		
	Less than 35 years	112 (79.4)
	35 years and above	29 (20.6)
Race		
	Malay	45 (31.9)
	Chinese	27 (19.1)
	Indian	65 (46.1)
	Others	4 (2.8)
Marital status		
	Single	104 (73.8)
	Married	35 (24.8)
	Divorced/Widowed	2 (1.4)
Education level		
	Secondary and lower	19 (13.5)
	Tertiary	122 (86.5)
Employment status		
	Unemployed	64 (45.4)
	Employed	77 (54.6)
Sector of employment		
	Government	36 (25.5)
	Private	58 (41.1)
	Self-employed	41 (29.1)
Income		
	< RM 1000	70 (49.6)
	RM 1000–RM 5000	49 (34.8)
	> RM5000	18 (12.8)
General health status		
	Excellent	42 (29.8)
	Very good	55 (39.0)
	Good	44 (31.2)
Frequency of pharmacy visits		
	Once a month	18 (12.8)
	More than once a month	24 (17.0)
	Once every 2-3 months	65 (46.1)
	Once every 6-12 months	34 (24.1)

Table II: Summary of the common reasons public visit a community pharmacy (n=141)

Questionnaire items	Number of respondents, n (%)									
	1		2		3		4		5	
To get advice and treatment for minor ailments (e.g.fever, flu, indigestion)	38	(27.0)	18	(12.8)	33	(23.4)	18	(12.8)	34	(24.1)
To purchase or get advice on prescription and non-prescription medicines	36	(25.5)	18	(12.8)	34	(24.1)	30	(21.3)	23	(16.3)
To purchase vitamins/supplements	26	(18.4)	23	(16.3)	24	(17.0)	29	(20.6)	39	(27.7)
To get advice on general health or diagnosed illness	64	(45.4)	25	(17.7)	26	(18.4)	14	(9.9)	11	(7.8)
To purchase home diagnostic devices (e.g.glucometer, blood pressure meter)	57	(40.4)	18	(12.8)	24	(17.0)	22	(15.6)	20	(14.2)

** Likert Scale 1 to 5: 1 being the least common to 5 being the most common reason*

Table III: Summary of the common minor ailments that public seek advice and treatment from the pharmacist (n=141)

Questionnaire items	Number of respondents, n (%)									
	1		2		3		4		5	
Body ache and pain (e.g. headache, fever, back pain)	26	(18.4)	21	(14.9)	27	(19.1)	29	(20.6)	38	(27.0)
Upper respiratory tract (e.g. cold, flu)	33	(23.4)	24	(17.0)	23	(16.3)	24	(17.0)	35	(24.8)
Mouth and throat (e.g. mouth ulcer, sore throat)	41	(29.1)	25	(17.7)	23	(16.3)	22	(15.6)	29	(20.6)
Gastrointestinal symptoms (e.g. constipation, diarrhoea, gastritis)	45	(31.9)	22	(15.6)	26	(18.4)	26	(18.4)	21	(14.9)
Eye-related (e.g. dry eye, itchy and watery eyes)	47	(33.3)	16	(11.3)	26	(18.4)	30	(21.3)	20	(14.2)
Skin related (e.g. dry skin, Athlete's foot, eczema)	48	(34.0)	14	(9.9)	33	(23.4)	26	(18.4)	20	(14.2)
Ear-related (e.g. hardened ear wax)	76	(53.9)	18	(12.8)	26	(18.4)	15	(10.6)	5	(3.5)
Head lice	77	(54.6)	20	(14.2)	24	(17.0)	8	(5.7)	10	(7.1)

Likert Scale 1 to 5: 1 being the least common to 5 being the most common reason

Table IV: Summary of public's perceptions towards management of minor ailments by community pharmacists (n=141)

Questionnaire items	Number of respondents, n (%)									
	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
Community pharmacists have the knowledge to provide advice on general health conditions including minor ailments	3	(2.1)	1	(0.7)	22	(15.6)	72	(51.1)	43	(30.5)
Community pharmacists are qualified to provide treatment for minor ailments and refer to the doctor when necessary	2	(1.4)	3	(2.1)	24	(17.0)	68	(48.2)	44	(31.2)
Community pharmacists help in counselling patients to understand the symptoms better	2	(1.4)	0	(0.0)	32	(22.7)	73	(51.8)	34	(24.1)
Community pharmacists provide access for self-medication in minor ailment management	1	(0.7)	4	(2.8)	43	(30.5)	62	(44.0)	31	(22.0)
Community pharmacists allow patients access to extended range of medications for minor ailments in a community pharmacy setting	3	(2.1)	11	(7.8)	50	(35.5)	53	(37.6)	24	(17.0)
Community pharmacists help patients to be more confident in self-care of minor ailments	1	(0.7)	4	(2.8)	42	(29.8)	59	(41.8)	35	(24.8)
Management of minor ailments by community pharmacists saves patients' time and cost of seeking the treatment from general practitioners (GPs)	1	(0.7)	3	(2.1)	31	(22.0)	69	(48.9)	37	(26.2)

health items were the common attributes that received major agreement from the respondents. Nevertheless, (n=60, 42.6%) were neutral and (n=34, 24.1%) 'strongly disagreed' and 'disagreed' on the attribute "pharmacy has a private counselling room for a confidential discussion."

Median pharmacy staff score and pharmacy services score were 22 (Mdn =22, IQR = 5.0) and 30, (Mdn =30, IQR = 5.5) respectively. Concerning responses towards pharmacy staff and relation (Table VI), the majority of the respondents 'strongly agreed' (n=41, 29.1%) and 'agreed' (n=69, 48.9%) that pharmacist or pharmacy staff being friendly and approachable were important attributes that determine their likelihood of visiting a pharmacy. In addition to that, they 'strongly agreed' (n=33, 23.4%) or 'agreed' (n=70, 49.6%) to the pharmacist or pharmacy staff to meet their needs. Similar ratios were also found for the 'pharmacist keeps my personal information confidential' attribute. However, several respondents were either 'neutral' (n=56, 39.7%), 'disagreed' (n=26, 18.4%), or 'strongly

Table V: Summary of public's responses towards pharmacy characteristics attribute (physical facilities and location) which influences the likelihood of using community pharmacy for minor ailment management (n=141)

Questionnaire items	Number of respondents, n (%)				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Pharmacy is conveniently located (i.e. close to home/workplace)	0 (0.0)	2 (1.4)	20 (14.2)	50 (35.5)	69 (48.9)
Pharmacy has car parking availability or easy to find a parking close to the pharmacy	1 (0.7)	12 (8.5)	47 (33.3)	43 (30.5)	38 (27.0)
Pharmacy is open in the evening/on weekends	1 (0.7)	6 (4.3)	23 (16.3)	60 (42.6)	49 (34.8)
Pharmacy has easy access for disabled and people with baby carriages	4 (2.8)	13 (9.2)	48 (34.0)	45 (31.9)	30 (21.3)
Pharmacy premise is tidy and clean	0 (0.0)	2 (1.4)	12 (8.5)	65 (46.1)	62 (44.0)
Pharmacy has enough counters and sufficient waiting area to attend to the customers/patients	3 (2.1)	10 (7.1)	48 (34.0)	49 (34.8)	30 (21.3)
Pharmacy has a private counselling room for a confidential discussion	7 (5.0)	27 (19.1)	60 (42.6)	26 (18.4)	21 (14.9)
Medicines and health items are clearly displayed	1 (0.7)	4 (2.8)	28 (19.9)	65 (46.1)	43 (30.5)

Table VI: Summary of public's responses towards pharmacy staff and relation attribute which influences the likelihood of using community pharmacy for minor ailment management (n=141)

Questionnaire items	Number of respondents, n (%)				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Pharmacist or pharmacy staffs recognize or know me	8 (5.7)	26 (18.4)	56 (39.7)	33 (23.4)	18 (12.8)
I see the same pharmacist each time I visit the pharmacy	5 (3.5)	23 (16.3)	51 (36.2)	44 (31.2)	18 (12.8)
Pharmacist or pharmacy staffs are friendly and approachable	0 (0.0)	2 (1.4)	29 (20.6)	69 (48.9)	41 (29.1)
Pharmacist or pharmacy staffs have previously been able to meet my needs	3 (2.1)	3 (2.1)	32 (22.7)	70 (49.6)	33 (23.4)
Pharmacist spends as much time as necessary with me	6 (4.3)	6 (4.3)	49 (34.8)	58 (41.1)	22 (15.6)
Pharmacist keeps my personal information confidential	3 (2.1)	1 (0.7)	34 (24.1)	62 (44.0)	41 (29.1)

disagreed' (n=8, 5.7%) with the attribute 'pharmacist or pharmacy staff recognize or know me' to influence their likelihood of visiting a pharmacy. They were also 'neutral' (n=51, 36.2%), 'disagreed' (n=23, 16.3%) or 'strongly disagreed' (n=5, 3.5%) with 'I see the same pharmacist each time I visit the pharmacy'.

The summary of the public's responses towards pharmacy services is presented in Table VII. The majority of the respondents had either 'strongly agreed' (n=33, 23.4%) and 'agreed' (n=69, 48.9%) with 'Pharmacy is equipped with a wide selection of medicines and informational material on minor ailments' as an important attribute to visit a pharmacy for minor ailment treatment. A similar number of responses were also identified for 'Pharmacist offers enough time to ask questions or discuss any concerns, 'Pharmacist attends to me fast, and I am not kept waiting long' and 'Pharmacy offers various screening tests' attributes. Nevertheless, about 54 (38.3%) respondents were 'neutral' whereas a few 'disagreed' (n=19, 13.5%) and 'strongly disagreed' (n=10, 7.1%) with the attribute 'Pharmacist offers a follow-up appointment with him/her'.

As an overall conclusion, the association between attributes impacting respondents' likelihood of accessing

Table VII: Summary of public's responses towards pharmacy services attribute which influences the likelihood of using community pharmacy for minor ailment management (n=141)

Questionnaire items	Number of respondents, n (%)				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Pharmacist attends to me fast and I am not kept waiting long	2 (1.4)	4 (2.8)	38 (27.0)	62 (44.0)	35 (24.8)
Pharmacist offers enough time to ask questions or discuss any concerns	0 (0.0)	4 (2.8)	39 (27.7)	62 (44.0)	36 (25.5)
Pharmacist informs me of all possible treatments for my minor conditions	0 (0.0)	5 (3.5)	43 (30.5)	62 (44.0)	31 (22.0)
Pharmacist offers a follow-up appointment with him/her	10 (7.1)	19 (13.5)	54 (38.3)	44 (31.2)	14 (9.9)
Pharmacy is equipped with a wide selection of medicines and informational material on minor ailments	1 (0.7)	2 (1.4)	35 (24.8)	69 (48.9)	33 (23.4)
Pharmacy usually has the medicine in stock or provides it in 24 hours or as soon as possible	0 (0.0)	7 (5.0)	50 (35.5)	56 (39.7)	28 (19.9)
Pharmacy offers various screening tests (e.g. blood glucose & cholesterol, blood pressure, body mass index etc.)	0 (0.0)	4 (2.8)	40 (28.4)	62 (44.0)	35 (24.8)
Pharmacist is easily reachable by telephone or e-mail during opening hours	5 (3.5)	9 (6.4)	48 (34.0)	56 (39.7)	23 (16.3)

community pharmacy services for mild ailments was examined. The score for pharmacy characteristics and the score for pharmacy staff had a significant positive association (Spearman's r = 0.574, P-value < 0.001). A significant positive association was discovered in the current investigation between pharmacy characteristics and pharmacy services scores (Spearman's r = 0.636, P-value < 0.001). The increase in the pharmacy staff score significantly increased the pharmacy services score (Spearman's r = 0.716, P-value < 0.001). There is a positive correlation between pharmacy characteristics and pharmacist staff with their services.

Apart from that, the demographic and characteristics of respondents were also tested against the perception, pharmacy characteristics, pharmacy staff relation, and pharmacy services scores. It was found that the median perception score is slightly higher among females (Mdn = 28, IQR = 4.8) compared to males (Mdn = 27.0, IQR = 5.5). Similarly, median perception score among public respondents earning lesser than RM1000 (Mdn = 28, IQR = 5.8) were higher compared to respondents earning between RM 1001 to RM 5000 (Mdn = 26, IQR = 6.0) and more than RM 5000 (Mdn = 27.5, IQR = 6.3). The median pharmacy characteristics score among respondents aged less than 35 years was higher (Mdn = 31, IQR = 29.0) compared to respondents aged above 35 years old (Mdn = 29.0, IQR = 8.5). In addition, a One-way ANOVA test was performed to determine the difference in the mean of pharmacy characteristics between frequency of pharmacy visits. Respondents who frequently visit the pharmacy at least once every month had slightly higher scores (M = 31.3, SD = 5.7) than less frequent respondents. Pharmacy staff and relation score among Malay respondents (Mdn = 23, IQR = 5.5) and Chinese respondents (Mdn = 23, IQR = 6.0) were slightly higher compared to Indian respondents (Mdn = 21, IQR= 4.5) and other races (Mdn = 21.5, IQR = 8.3). The pharmacy services score among married respondents (Mdn = 31, IQR = 4) were higher compared to single respondents (Mdn = 30.0, IQR = 6.0).

DISCUSSION

This study has managed to explore the public's perception and agreement on community pharmacists and services related to minor illness management. Significant positive relationships were identified for pharmacy characteristics, service, and staff. Though several challenges were noted, the implications of the public acknowledging specific attributes were crucial in further supporting community pharmacists' services, especially in the private practice setting. The following discusses those agreements, attributes, and their associated relative preferences and characteristics.

Community pharmacies are primarily known for dispensing over-the-counter medications and products such as supplements. There were many indications of why the public participants visited the pharmacies.

However, they show a lack of awareness of the community pharmacists' being advisors related to general health, self-check point of care tools, and illness diagnosis, including common minor ailments such as head lice and ear-related conditions. A previous study reported that the absence of dispensing separation may have contributed to this situation (11). Since general practitioners can prescribe and dispense medication at their premises, this action would have curbed the public's confidence in community pharmacists' ability to manage minor illnesses. Nevertheless, most of the public participants agreed on the community pharmacists' credentials and qualifications as professionals who are knowledgeable in general health conditions and capable of counseling patients.

The condition of pharmacy premises being tidy and clean was an important attribute to attain the publics' preference visiting the pharmacy. Whereas, convenient accessibility, location, and setup of the premises, all day and long business opening hours were also major attributes that were perceived as a requirement. As foreseeable, these factors were similarly identified from other studies (6, 12, 13). Meanwhile, the public generally accepts pharmacies to seek health advice and treatment apart from just being a business venue similar to general practitioner private clinics. Therefore, their expectation for community pharmacies to provide a counseling room is much more welcomed.

Nevertheless, the public ought to be made aware of the Community Pharmacy Benchmarking Guideline (2016), which emphasizes standard operating procedures and several types of community pharmacy premise setup requirements in Malaysia (14). Furthermore, community pharmacists are bound to their ethics outlined in the Code of Conduct for Pharmacists in Malaysia (2009) (15). They are required to consistently practice and supervise their staff to maintain good public relations communication, appropriate soft skills, and high integrity regarding patients' records and discussion. These attributes were strongly reflected as a necessity in this study, including spending adequate time and fast service and providing a wide selection of medicine and product options. Yet, it is still a far cry, and extra effort is needed to enhance the public's confidence to seek a referral from community pharmacists. But for this to transpire, support and collaborative relationships with related healthcare professionals are required (16). It's worth noting that the pharmacy degree program in Malaysia equips students with sufficient competencies, such as ethical practice based on codes of conduct, communication skills, medication review, and minor ailment treatment management with follow-up or referral.

Another notion, an observation regarding public economic status and their perception of pharmacy characteristics, pharmacy staff relation, and pharmacy services, was also noted. There was a possibility that the public with low-income status perceived pharmacy as a cost-effective alternative to obtain pharmaceutical services (17). Moreover, there was better acknowledgement and awareness of pharmacy services among the younger adults below 35 years of age, which could be due to easy and fast service requests attributes concurrently to their working lifestyle or possibly to their rampant exposure to online information and social media communication. But, absolutely the public participants who quite often frequented pharmacy premises perceived a positive need for community pharmacists' services. And females had a higher tendency to be more loyal to one pharmacy premise (18) though married individuals had better preferences, as highlighted in this study. Being familiar with the same service provider indeed tends to enhance the likelihood of these specific attributes. Thus, it is noteworthy that public preference towards a community pharmacy also considers medication or treatment substitute suggestions, low prices, and promotions on sold products.

This study has several limitations. As this was a cross-sectional survey, it was difficult to reflect the changes in the public participants' perceptions of future levels. Nonetheless, it has informed the current public's perceptions of community pharmacists' minor ailments' services in Malaysia. There could also be that proportional sampling was inadequate to ensure the generalization of public respondents for all areas or states in Malaysia. The low sample size and questionnaire prepared in the English language also contributed to its limitation.

CONCLUSION

In conclusion, there is a need to enhance public participants to acknowledge and utilize the community pharmacy services in minor illness management in Malaysia. However, there were indications of the public's relative preferences for specific community pharmacy characteristics and required attributes to enhance their likelihood to support the service. There is a potential future towards this aim; however, this overall impact will be more beneficial to the stakeholders if barriers and challenges were to be addressed.

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REFERENCES

1. Ayele AA, Mekuria AB, Tegegn HG, Gebresillassie BM, Mekonnen AB, Erku DA. Management of minor ailments in a community pharmacy setting: Findings from simulated visits and qualitative study

in Gondar Town, Ethiopia. PLOS ONE. 2018;13(1). doi: 10.1371/journal.pone.0190583
2. Okai GA, Abekah-Nkrumah G, Asuming PO. Perceptions and trends in the use of community pharmacies in Ghana. Journal of Pharmaceutical Policy and Practice. 2019;12(1). doi: 10.1186/s40545-019-0186-x
3. Morris CJ, Cantrill JA, Weiss MC. Minor ailment consultations: A mismatch of perceptions between patients and GPS. Primary Health Care Research and Development. 2003;4(4):365–70. doi: 10.1191/1463423603pc163oa
4. Bellingham C. Introducing the new Scottish contract. Pharm J. 2005;275(7376):637.
5. Paudyal V, Watson MC, Sach T, Porteous T, Bond CM, Wright DJ, et al. Are pharmacy-based minor ailment schemes a substitute for other service providers? British Journal of General Practice. 2013;63(612). doi: 10.3399/bjgp13X669194.
6. Porteous T, Ryan M, Bond C, Watson M, Watson V. Managing minor ailments; the public's preferences for attributes of community pharmacies. A discrete choice experiment. PLOS ONE. 2016;11(3). doi: 10.1371/journal.pone.0152257
7. Porteous T, Ryan M, Bond CM, Hannaford P. Preferences for self-care or professional advice for minor illness: a discrete choice experiment. Br J Gen Pract. 2006 Dec;56(533):911-7. PMID: 17132378; PMCID: PMC1934050.
8. Hindi AM, Schafheutle EI, Jacobs S. Applying a whole systems lens to the General Practice Crisis: Cross-sectional survey looking at usage of community pharmacy services in England by patients with long-term respiratory conditions. BMJ Open. 2019;9(11). doi: 10.1136/bmjopen-2019-032310.
9. Selvaraj A, Redzuan AM, Hatah E. Community pharmacists' perceptions, attitudes and barriers towards pharmacist-led minor ailment services in Malaysia. International Journal of Clinical Pharmacy. 2020;42(2):777–85. doi: 10.1007/s11096-020-00973-x
10. Sackman H. Delphi Assessment: Expert Opinion, Forecasting and Group Process (Internet). ITSEYERIS.com. Emerio Publishing; 1974 (cited 2021Oct31). Available from:https://www.itseyeris.com/book/delphi-method-48-success-secrets-48-most-asked-questions-on-delphi-method-what-you-need-to-know
11. Kho BP, Hassali MA, Lim CJ, Saleem F. Challenges in the management of community pharmacies in Malaysia. Pharmacy Practice. 2017;15(2):933. doi: 10.18549/PharmPract.2017.02.933.
12. Franic DM, Haddock SM, Leslie Tootle T, Nathan W. Pharmacy patronage: Identifying key factors in the decision making process using the determinant attribute approach. Journal of the American Pharmacists Association. 2008;48(1). doi: 10.1331/JAPhA.2008.07014.
13. Gammie S, Rodgers R, Loo RL, Corlett S, Krska J. Medicine-related services in Community Pharmacy: Public Preferences for pharmacy attributes and promotional methods and comparison with pharmacists' perceptions. Patient Preference and Adherence. 2016; Volume 10:2297–307. doi: 10.2147/PPA.S112932
14. Community Pharmacy Benchmarking Guideline. Pharmaceutical Services Programme. (n.d.). Retrieved June 1, 2021, from https://www.pharmacy.gov.my/v2/en/documents/community-pharmacy-benchmarking-guideline.html.
15. Pharmacy Board of Malaysia. Code of conduct for pharmacists and bodies corporate. 2009.https://www.pharmacy.gov.my/v2/en/documents/code-conduct-pharmacist s-and-bodies-corporate-2009.html.
16. Rajiah K, Ting LC, Shan CS, et al. Community pharmacists' perception on patient counseling and continuing pharmacy education program in East Malaysia. Malaysian Journal of Public Health Medicine.2016;16(1):15–22.
17. Dalton K, Byrne S. Role of the pharmacist in reducing healthcare costs: Current insights. Integrated Pharmacy Research and Practice. 2017; Volume 6:37–46. doi: 10.2147/IPRP.S108047
18. Merks P, Kaźmierczak J, Olszewska A, Kołtowska-Hдggstrum M. Comparison of factors influencing patient choice of community pharmacy in Poland and the UK, and identification of components of pharmaceutical care. Patient Preference and Adherence. 2014;:715. doi: 10.2147/PPA.S53829