Patient Preference and Adherence

Dovepress

open access to scientific and medical research

Open Access Full Text Article

ORIGINAL RESEARCH

Publics' Knowledge, Perception and Practice on Management of Minor Ailment in Community Pharmacy in Malaysia

Mei Mei Tew[1,2], Ernieda Hatah[1], Maisarah Zakaria[1], Mohd Makmor-Bakry[1]

[1]Faculty of Pharmacy, Universiti Kebangsaan Malaysia, Kuala Lumpur, 50300, Malaysia; [2]Clinical Research Centre, Hospital Sultan Abdul Halim, Ministry of Health Malaysia, Kedah, Malaysia

Correspondence: Ernieda Hatah, Faculty of Pharmacy, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, Kuala Lumpur, 50300, Malaysia, Tel +603-92897328, Fax +603-26983271, Email ernieda@ukm.edu.my

Introduction: Minor ailments can be defined as medical conditions that can be self-diagnosed, resolve on their own, and be self-managed with over-the-counter (OTC) medications. Nevertheless, minor ailment management was reported to consume much of the health care resources, which may burden the health care system as it increases patient waiting times and the doctors' workload.

Purpose: To evaluate the publics' knowledge, perceptions, and practice on the management of minor ailments in community pharmacies in Malaysia and factors that may influence it.

Methods: A cross-sectional, self-administered survey was conducted between Dec 2020 and April 2021 among general population in Malaysia. The self-developed and validated survey form consisted of four sections included respondents' demographics, knowledge, perceptions and practices toward minor aliment management in community pharmacy and was distributed using Google Forms via social media platforms. Factors influencing good public practices and perceptions were modeled using binary logistic regression.

Results: A total of 562 respondents completed the survey. Majority (n = 354, 63.0%) have good knowledge (score of 9–10), good practice (n = 367, 65.3%) (score 18–30) and good perception score (n = 305, 54.3%) (score 41–60). Variables such as age, those with higher degree (master/PhD), and prior experience and frequency of using community pharmacy had significant influence on respondents' good perceptions, while age and frequency of visit were found to influence respondents' good practice on minor ailment management in community pharmacy.

Conclusion: Public in Malaysia have good knowledge on management of minor ailments by community pharmacies. Nevertheless, the publics' perceptions and practice need to be further improved. More advocacy on community pharmacy's roles on minor ailment management among public is need to strengthen the Malaysia's healthcare system resources.

Keywords: self-medication, publics' knowledge, perception and practice, minor ailment

Introduction

Minor ailments can be defined as medical conditions that can be self-diagnosed, resolve on their own, and be self-managed with over-the-counter (OTC) medications.[1–3] The common examples of minor ailments include conditions such as common colds, acute diarrhoea, rash, dermatitis, eczema, constipation, muscle aches and pains, allergies, headaches, back pain, insect bites, heartburn, fevers, and foot conditions such as corns and callouses, among others.[4,5] Self-management or self-medication for minor ailment is usually practised for minor ailments management, before receiving advice from the health care providers.[6] As defined by the World Health Organization (WHO), self-medication is "the selection and use of medicines by individuals to treat self-recognised illnesses or symptoms".[7] The significant benefits of self-medication include time savings as a doctor's appointment is usually not needed and treatment or over-the-counter (OTC) medicines are conveniently available in community pharmacies, supermarkets, and retail stores.[8]

Community pharmacies were reported to play an important role to facilitate self-management for minor ailments and provide access to OTC for self-medication.[9] Community Pharmacists (CPs), as the most accessible healthcare

Received: 3 May 2023
Accepted: 19 June 2023
Published: 24 June 2023

professionals to the public, have responsibilities to improve public health by enhancing patient care and resulting in optimum treatment outcomes.[7,10] A study in the United Kingdom (UK) demonstrated that pharmacists could manage up to 8% emergency department (ED) presentations.[11] Management for minor ailment was found to occupy a significant portion of health-care resources. It was reported that minor ailments accounted for approximately 5% of ED visits and 13% of GP consultations in the UK.[1,12] On the other hand, Norway recorded a greater proportion of ED visits for minor ailments (28%).[4] Meanwhile, in Malaysia, 55% and 62.1% of ED visits were deemed unsuitable or non-critical, respectively.[13,14] Minor ailment treatment in EDs is more costly and may place a strain on the country's health-care system by increasing physicians' workload when the focus should be on more serious medical conditions. A recent review found that integrating community pharmacies into the healthcare system and treating minor ailments lower the overall healthcare costs and may be a potential element for efficient resource use.[15] A systematic review published by Paudyal et al recognized the patient and economic benefits of minor ailment services available in the respected countries. The review revealed high rates of symptom remission and low rates of re-consultation, indicating that minor ailments are being treated effectively in pharmacies. Between 68% and 94.4% of patients reported symptom relief, while only 2.4% to 23.4% of patients sought for a second opinion.[16]

According to a national survey performed in Malaysia in 2015, 76% of the publics acquired their medical goods from community pharmacies. Seventy percent of all respondents stated that they needed extra guidance on the use of medicines from their CPs.[17] Although it is a well-established practice in Malaysia for CPs to advise patients on self-care and self-medication, the potential for the CPs to meet patients' needs for the management of minor ailments and support on efficient health system resources has not been recognized. Since Malaysia has a reasonably excellent distribution of community pharmacies all over the country, they can be a good health care resource for the general public to seek guide and assistance for their minor ailments management.[18] A recent study in Malaysia reported majority of CPs had positive perceptions and attitudes towards pharmacist-led minor ailment services. Barriers to providing the services were reported to include lack of patient medical information, support from other healthcare professionals and unavailability of dispensing separation.[19] Nonetheless, no study has been conducted to assess the Malaysian publics' perceptions of CPs as a health care resource in the treatment of minor ailments and factors that may influence it. Hence, the purpose of this research is to assess the publics' knowledge, perception, and practice on minor ailments treatment in Malaysian community pharmacies.

Methods

This study was conducted as cross-sectional survey of publics' knowledge, perceptions and practice of minor ailment management in community pharmacies. Data collection was done using self-administered questionnaire which was distributed via social media platforms using Google Form through WhatsApp, Facebook, email and telegram from 1st December 2020 to 30th April 2021. The inclusion criteria were Malaysian, 18 years old and able to provide informed consent. The exclusion criteria include those who are unable to understand and read Malay or English and incomplete survey of more than 20%. Prior to participation, respondents were informed on the aims of the study and their rights as participants and completion and return of the questionnaire were considered as consent to participate in the study. Ethics approval was granted from the Research Ethics Committee of Universiti Kebangsaan Malaysia (UKMPPI/111/8/JEP-2020-643). The research was conducted in accordance with the Declaration of Helsinki.

The questionnaire was developed and prepared in English and Malay language based on a literature review of previous studies and input from experts.[16,19–21] An expert team that consists of three academicians and two pharmacists had evaluated the content validity and clarity of questions. There were four sections in the survey which are: 1) the demographics and information on respondents' past experience in community pharmacies; 2) knowledge; 3) perception; and 4) practice related to minor ailment management in community pharmacy settings in Malaysia. The definition of minor ailments and CPs are provided at the beginning of the survey.

Section 1 gathered personal data from respondents such as age, gender, race, employment, school background, income, experience, and frequency of attending community pharmacies for minor ailment treatment. The second section contains ten statements assessing respondents' knowledge and the roles of CPs in minor ailment management with yes, no, or not sure response choices. Each correct answer received a score of 1, while incorrect and unsure answers received

none. This section has a total score of 10 and was categorized to good (9–10) and poor knowledge (<8) using median cut-off score, as the distribution of the knowledge score was not normally distributed. The third section, which assesses respondents' perceptions of minor ailment management in community pharmacy settings, includes 12 questions with 5-point Likert-type scale items encompassing from strongly disagree to strongly agree. The section evaluated the publics' perception of CPs' ability in minor ailments management in comparison to doctors, as well as perceptions in terms of expense, time, and location when utilizing a minor ailments management in a community pharmacy. A score between one and five were given to "strongly disagree" to "strongly agree" response options and the full score for this section is 60. For negative statements, reverse scoring was used. The score was categorized to good (41–60) and poor perceptions (12–40) using median cut-off score, as the distribution of the perception score was not normally distributed. The final part assesses the publics' practice in the treatment of minor ailments. It comprises six statements with 5-Likert-scale items of "Never", "Rarely", "Sometimes", "Very often" and "Always". The respondents were asked how they usually treat or manage minor ailments, as well as their preferred facility or health care practitioner when seeking medical care. One to five marks were given accordingly to "Never" and "Always" answer options. The score was categorized to good (18–30) and poor practices (6–17) using median cut-off score, as the distribution of the practice score was not normally distributed.

Content validity conducted with five experts in the area. The I-CVI and S-CVI was 1.00 and 0.90. The face validity and reliability tests were performed on 26 public respondents who were not included as the study participants. Cronbach's alpha analysis found the internal consistency of the scale obtained for sections 2, 3, and 4 were 0.722, 0.869, and 0.751. Data were analysed using the Statistical Package for Social Science (SPSS) version 26. Descriptive statistics such as frequency and percentage were performed for demographic data and respondent's summary of response. Binary logistic regression was conducted to evaluate factors that may influence respondent's good practice and perception related to minor ailment management. The tested variables include demographic data such as age, gender, ethnicity, occupation, experience and frequency of visits to community pharmacy, income and knowledge score related to CPs' minor ailment management. A univariate test was utilized prior to the final modelling and only variables with a p-value less than 0.25 were included in the final model analysis. Using the backward elimination method, the final model of good publics' perception and practice of minor ailments management was analysed, and variables with a p-value of <0.05 were considered significant.

Results

A total of 562 respondents completed the questionnaires. Majority of the respondents were female (n = 412, 73.3%) with mean age ± standard deviation (SD) of 29.03 ± 10.04 years, ranging between 20 and 69 years old. A total of 450 respondents (80.1%) were younger than 40 years old. There were 361 (64.2%) respondents with Malay ethnicity, 156 (26.3%) were Chinese, 21 (3.7%) were Indian, and 24 (4.3%) were of another ethnicity. The summary of respondents' demographics is presented in Table 1. The majority of respondents (n = 472, 84.0%) possessed a diploma or degree. Half of the respondents (n = 283, 50.4%) had visit community pharmacies for minor ailment treatment. Of the 355 respondents who stated their frequency of visits to community pharmacies, 226 (63.7%) said they "rarely" visit the community pharmacy, which means they have never or had only one visit in the previous three months. A total of 129 (36.3%) respondents "sometimes" or "often", which is at least visit the community pharmacy once a month or more than twice a month.

The respondent's median score on knowledge towards managing minor ailments in community pharmacies was 9, with an interquartile range (IQR) of 8–10. The majority of the respondents (n = 354, 63.0%) had a good perception on the management of minor ailment in community pharmacies in Malaysia. Respondents acknowledged that minor ailments can be managed by physicians and CPs and that the CPs may refer minor ailments to a doctor if required. Respondents were also aware that minor ailments can be managed through self-care and self-medication and that medications for minor ailments can be acquired from community pharmacy. Table 2 presents a summary of publics' knowledge on minor ailment management in community pharmacies in Malaysia.

The respondent's median score on perceptions towards managing minor ailments in community pharmacies was 41, with an interquartile range (IQR) of 37–48. The majority of the respondents (n = 305, 54.3%) had a good perception on

Table 1 Demographic Characteristics of Respondents (n = 562)

Demographic Characteristics	Mean (SD)	n (%)
Age (years)	29.03 (10.04)	
Gender		
Male		150 (26.7)
Female		412 (73.3)
Ethnicity		
Malay		361 (64.2)
Chinese		156 (27.8)
Indian		21 (3.7)
Others		24 (4.3)
Occupation		
Unemployed		22 (3.9)
Employed		262 (46.7)
Student		277 (49.4)
Education		
Secondary		50 (8.9)
Diploma/Degree		472 (84.0)
Master/PHD		40 (7.1)
Prior experience visiting to Community Pharmacy		
No		279 (49.6)
Yes		283 (50.4)
Income (MYR)		
<1000		224 (43.0)
1000–3999		131 (25.1)
4000–6000		60 (11.5)
>6000		106 (20.3)
Frequency of Community Pharmacy Visit		
Rarely*		226 (63.7)
Sometimes to Often**		129 (36.3)

Notes:*Rarely: never or only once in the past 3 months; **Sometimes to Often: At least once in a month to more than twice in a month.
Abbreviations: MYR, Malaysian Ringgit; SD, Standard Deviation.

the management of minor ailment in community pharmacies in Malaysia. A total of 44.1% (n = 248) and 44.6% (n = 228) respondents were neutral on whether medical doctors provide superior treatment for minor ailments than CPs and whether minor ailments treated by community pharmacies are more likely to be misdiagnosed. Furthermore, the majority (n = 250, 44.5%) agreed that CPs have been trained to identify and treat minor ailments, and that they (n = 263, 46.8%) closely examined the information on minor ailments before suggesting treatment options. Respondents also perceived (n = 238, 42.3%) that minor ailment care at a community pharmacies is quicker (n = 242, 43.1%) and more convenient, and that it relieves the overburdening of government health centres or hospitals, allowing physicians to concentrate on more complicated diseases (n = 222, 39.5%). The majority of respondents (n = 207, 36.8%) perceived that the expense of treating minor ailments in a community pharmacy is less than that of a private doctor's clinic. Table 3 summarizes the publics' perceptions towards minor ailment management in community pharmacies.

Respondents' median practice score for managing minor ailments in community pharmacies was 18 with an interquartile range (IQR) of 17–20. The majority (n = 367, 65.3%) of respondents had a good practice score on the management of minor ailment in community pharmacies in Malaysia. The majority respondents in this study (n = 251, 44.7%) only had "sometime" seeking treatment for minor ailments in general, use home or natural remedies as their preferred treatment for minor ailment

Table 2 Publics' Knowledge on Minor Ailment Management in Community Pharmacy (n = 562)

	Knowledge	Yes n (%)	No n (%)	Not Sure n (%)
1	Minor ailments are commonly uncomplicated	438 (77.9)	77 (13.7)	47 (8.4)
2	Minor ailments can be managed through proper self-care	474 (84.3)	59 (10.5)	29 (5.2)
3	Minor ailments can be identified without a doctor's diagnosis	430 (76.5)	96 (17.1)	36 (6.4)
4	Common flu is an example of minor ailment	488 (86.8)	41 (7.3)	33 (5.9)
5	Minor ailments can be managed through self-medication	443 (78.8)	74 (13.2)	45 (8.0)
6	Minor ailments can be treated using home or natural remedies	382 (68.3)	88 (15.7)	90 (16.0)
7	Minor ailments can be managed by the doctor	528 (94.0)	22 (3.9)	12 (2.1)
8	Other than self-care/self-management, minor ailment can be treated/managed by pharmacists	516 (91.8)	8 (1.4)	38 (6.8)
9	I can get my medicines for treatment of minor ailment from community pharmacist/ retail pharmacist	491 (87.4)	11 (2.0)	60 (10.7)
10	Community pharmacists may refer a patient with minor ailment to a doctor if necessary	530 (94.3)	14 (2.5)	18 (3.2)

Table 3 Publics' Perception Towards Minor Ailment Management in Community Pharmacy (n = 562)

No	Perceptions	Distribution of Respondent's Scores n (%)				
		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
1	Community pharmacists are trained to diagnose and provide treatment for minor ailments	38 (6.8)	35 (6.2)	144 (25.6)	250 (44.5)	95 (16.9)
2	Medical doctors are able to provide better treatment in minor ailment compared to community pharmacists	29 (5.2)	53 (9.4)	248 (44.1)	145 (25.8)	87 (15.5)
3	Minor ailments treated by community pharmacist may at risk of misdiagnosis	39 (6.9)	151 (26.9)	228 (40.6)	124 (22.1)	20 (3.6)
4	Management of minor ailments by community pharmacists may cause delay in appropriate care	40 (7.1)	180 (32.0)	212 (37.7)	108 (19.2)	22 (3.9)
5	Community pharmacists always take the advantage to recommend unnecessary treatment for minor illnesses for the benefit of their business	91 (16.2)	213 (37.9)	162 (28.8)	83 (14.8)	12 (2.3)
6	Community pharmacists often carefully evaluate the information on minor ailments before recommending treatment options	34 (6.0)	29 (5.2)	162 (28.8)	263 (46.8)	74 (13.2)
7	Minor ailment treatment at community pharmacy is fast due to shorter waiting time compared to clinic and hospital	37 (6.6)	23 (4.1)	112 (19.9)	242 (43.1)	148 (26.3)
8	Treatment for minor ailment at community pharmacy is convenient because the location is easily accessible	39 (6.9)	12 (2.1)	124 (22.1)	238 (42.3)	149 (26.5)

(*Continued*)

Table 3 (Continued).

No	Perceptions	Distribution of Respondent's Scores n (%)				
		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
9	Managing minor ailments at community pharmacy allows me to be more confident in self-care of my health condition	35 (6.2)	47 (8.4)	225 (40.0)	190 (33.8)	65 (11.6)
10	The treatment of minor ailments in community pharmacies may reduce the overburden of government health clinics or hospital and allow doctors to focus on more complex diseases	36 (6.4)	46 (8.2)	133 (23.7)	222 (39.5)	125 (22.2)
11	The cost of treating minor ailment in community pharmacy is lower compared to doctor's clinic (private clinic)	43 (7.7)	28 (5.0)	156 (27.8)	207 (36.8)	128 (22.8)
12	Community pharmacists spend more time than doctors in discussing treatment for minor ailment with me	37 (6.6)	96 (17.1)	266 (47.3)	124 (22.1)	39 (6.9)

(n = 250, 44.5%) and use community pharmacies as options for getting treatment for a minor ailment (n = 289, 51.4%). Majority stated that they "never" seek treatment for minor ailment management in the hospital ED (n = 205, 36.5%), and only 39.7% (n = 223) "sometime" get their minor illness treated by the doctor in clinic. Table 4 presents the summary of respondents' practice score for minor ailment management in community pharmacies.

Only age (OR 0.956, 95% CI 0.932 to 0.981, P = 0.001), highest level of education (with master or PhD degree) (OR 4.29, 95% CI 1.316 to 13.986, P = 0.02), experience (OR 2.17, 95% CI 1.202 to 3.932, P = 0.01) and frequency of community pharmacies visit (OR 2.08, 95% CI 1.271 to 3.402, P = 0.004) had significant influence on good perception towards minor ailment management in community pharmacy. An increase in one year of age was found to reduce the likelihood of good perception on minor ailment management by CP by 0.003%. Therefore, as age increases, the odd of being having good perception in minor ailment management by community pharmacies decrease. Those with master or PhD degree were 4.29 times more likely to have a good perception on minor ailment management in community pharmacies. Those who

Table 4 Publics' Practice Towards Minor Ailment Management in Community Pharmacy (n = 562)

No	Practices	Distribution of Respondent's Scores n (%)				
		Never (1)	Rarely (2)	Sometimes (3)	Very Often (4)	Always (5)
1	I seek for treatment/advice even if my minor ailment is not serious	47 (8.4)	209 (37.2)	251 (44.7)	19 (3.4)	36 (6.4)
2	I use home or natural remedies to treat my minor ailment	27 (4.8)	124 (22.1)	250 (44.5)	94 (11.9)	67 (11.9)
3	I get treatment for my minor ailment from the community pharmacy	23 (4.1)	119 (21.2)	289 (51.4)	82 (14.6)	49 (8.7)
4	I get advice regarding management of my minor ailment from community pharmacy	62 (11.0)	132 (23.5)	240 (42.7)	75 (13.4)	53 (9.4)
5	I get treatment for my minor ailment from the hospital emergency unit.	205 (36.5)	143 (25.4)	159 (28.3)	29 (5.2)	26 (4.6)
6	I get treatment for my minor ailment from the doctor's or health clinic	25 (4.4)	118 (21.0)	223 (39.7)	115 (20.5)	81 (14.4)

had experience visited community pharmacies were 2.17 times more likely to have a good perception on minor ailment management in community pharmacies, while those who have visited community pharmacies more frequent were 2.08 times more likely to have good perception on minor ailment management in community pharmacies.

Meanwhile, significant factors that may influence respondents good practice in minor ailment management were only age (adjusted odds ratio [OR] 1.039, 95% CI 1.062–1.067, P = 0.004) and frequency of community pharmacy visit (OR 2.537, 95% CI 1.482–4.344, P = 0.001). Other variables such as gender, ethnicity, occupation, and income were non-significant (p > 0.05). An increase in one year of age was found to increase the likelihood of good practice on minor ailment management by CP by 0.039%. Therefore, as age increases, the odd of being having good practice in minor ailment management by community pharmacies increase. Those who visited community pharmacies more frequent were 2.5 times more likely to have good practice in minor ailment management in community pharmacies. The summary of the modelling analysis on factors that may influence respondents' good perceptions and practice of minor ailment management is presented in Table 5 and Table 6.

Table 5 Modelling of Respondents' Good Perception on Minor Ailment Management in Community Pharmacy in Malaysia

Variables	Univariate Logistic Regression				*p* value	Multivariate Logistic Regression				*p* value
	Crude OR	95% CI		Wald's χ^2 (df)		Adjusted OR	95% CI		Wald's χ^2 (df)	
Age (years)	0.962	0.923	−1.002	3.50 (1)	0.061	0.956	(0.932)	(0.981)	11.860 (1)	**0.001***
Gender										
Male	1									
Female	1.238	0.708	−2.163	0.560 (1)	0.454					
Ethnicity										
Malay	1			2.010 (3)						
Chinese	1.259	0.697	−2.276	0.581 (1)	0.446					
Indian	1.293	0.343	−4.884	0.144 (1)	0.704					
Others	2.225	0.672	−7.373	1.713 (1)	0.191					
Occupation										
Unemployed	1			2.378 (2)						
Employed	0.437	0.108	−1.771	1.343 (1)	0.247					
Student	0.97	0.970	−3.871	0.002 (1)	0.966					
Education										
Secondary	1			3.241 (2)		1			6.349 (2)	**0.042***
Diploma/Degree	1.358	0.488	−3.779	0.344 (1)	0.558	1.775	(0.688)	(4.580)	1.409 (1)	0.235
Master/PhD	2.974	0.772	−11.452	2.511 (1)	0.113	4.29	(1.316)	(13.986)	5.834 (1)	**0.016***
Experience										
No	1					1				
Yes	0.029	1.075	−3.716	4.789 (1)	**0.029***	2.174	(1.202)	(3.932)	6.599 (1)	**0.010***
Income (MYR)										
<1000	1			3.593 (3)						
1000–3999	0.093	0.341	−2.892	0.000 (1)	0.989					
4000–6000	1.259	0.360	−4.412	0.130 (1)	0.718					
>6000	2.188	0.653	−7.334	1.609 (1)	0.205					
Knowledge Score	1.112	0.966	−1.281	2.190 (1)	0.139					
Frequency of Community Pharmacy Visit										
Rarely	1					1				
Sometimes to Often	2.927	1.615	−5.304	9.262 (1)	**<0.001***	2.080	(1.271)	(3.402)	8.505 (1)	**0.004***

Note: *Significant variable.

Abbreviations: OR, odds ratio; CI, confidence interval; χ^2, chi-square; df, degree of freedom; MYR, Malaysian Ringgit.

Table 6 Modelling of Respondents' Good Practice on Minor Ailment Management at Community Pharmacy in Malaysia

Variables	Univariate Logistic Regression				*p* value	Multivariate Logistic Regression				*p* value
	Crude OR	95% CI		Wald's χ^2 (df)		Adjusted OR	95% CI		Wald's χ^2 (df)	
Age (years)	1.033	0.991	−1.078	2.316	0.128	1.039	1.062	−1.067	8.276 (1)	**0.004***
Gender										
Male	1									
Female	1.464	0.810	−2.646	1.591 (1)	0.207					
Ethnicity										
Malay	1			2.127 (3)						
Chinese	1.591	0.833	−3.039	1.981 (1)	0.159					
Indian	1.43	0.327	−6.249	0.226 (1)	0.635					
Others	1.347	0.412	−4.403	0.243 (1)	0.622					
Knowledge Score	1.187	1.024	−1.376	5.186 (1)	**0.023***	1.119	0.990	−1.264	3.223 (1)	0.072
Perception Score	1.043	1.004	−1.085	4.576 (1)	**0.032***	1.033	0.997	−1.070	3.294 (1)	0.070
Occupation										
Unemployed	1			1.576 (2)						
Employed	0.585	0.119	−2.873	0.436 (1)	0.509					
Student	0.38	0.079	−1.821	1.464 (1)	0.226					
Education										
Secondary	1			1.167 (1)						
Diploma/Degree	1.756	0.632	−4.879	0.240 (1)	0.280					
Master/PhD	1.43	0.434	−5.964	0.860 (1)	0.624					
Experience										
No	1									
Yes	0.731	0.377	−1.418	0.860 (1)	0.354					
Income (MYR)										
<1000	1			0.670 (3)						
1000–3999	1.157	0.390	−3.433	0.069 (1)	0.793					
4000–6000	0.822	0.233	−2.901	0.093 (1)	0.761					
>6000	1.195	0.358	−3.985	0.084 (1)	0.772					
Frequency of Community Pharmacy Visit										
Rarely	1					1				
Sometimes to Often	2.927	1.615	−5.304	12.536 (1)	**<0.001***	2.537	1.482	−4.344	11.52 (1)	**0.001***

Note: *Significant variable.
Abbreviations: OR, odds ratio; CI, confidence interval; χ^2, chi-square; df, degree of freedom; MYR, Malaysian Ringgit.

Discussion

The present study assessed the publics' knowledge, perception, and practice of minor ailment treatment in community pharmacies. The majority of respondents (76%) have a good score on the overall knowledge of management of minor ailments in the community pharmacy. Most were aware that minor ailments can be treated using self-care or self-medication. Previous study reported that pharmacists play an important role in assisting patients with self-care for minor ailments, counselling patients on the best course of action for minor ailment, and giving advice on the appropriate time to see a doctor for the condition that needs treatment.[22,23] The majority of respondents are also aware about referral among healthcare providers, in which CPs may recommend patients consult a doctor when appropriate. It was reported that good communication between doctor and pharmacist will improve the care of minor ailment in the community.[24–26] Nevertheless, a survey among Malaysian community pharmacists discovered that a common barrier for CPs in providing services for the management of minor ailments is the lack of support from other healthcare professionals such as GPs.[19] Improving communication between healthcare professionals could improve the quality of care provided by CPs for minor ailments.

In the current study, the majority of respondents also have good knowledge that CP can provide guidance for minor ailment management as well as supply medicines needed for treatment. With an adequate distribution of community pharmacies across Malaysia, only 17/144 districts were found to have lack of community pharmacy settings.[18] With good distribution of CPs, patients may have a good accessibility to seek and receive treatment for minor ailments in their community settings. Similarly, a study conducted in Scotland on the perceptions and experiences of people who use minor ailment scheme found that community pharmacies are primarily used because of their convenient locations[27] and that patients' decisions to seek treatment are significantly influenced by the location of the facilities.[28]

According to the respondents' perceptions in this study, more than half of the respondents believed that managing minor ailments at community pharmacies allows them to be more confident in self-care of their health condition. However, in terms of practice, only 9.4% of respondents indicated that they "always" received advice on minor ailment management from a community pharmacy. This might be as a result of a lack of understanding of CPs' roles in the management of minor ailments or as a result of CPs being mistaken for medicine salesperson rather than professionals who support and direct patients in the treatment of disease.[5,29] It could also be caused by pharmacist's lack of initiative in providing suitable self-care guidance for minor ailment treatment. Because of the risks associated with improper self-medication, having healthcare professionals on site to monitor and advise on appropriate self-care may be beneficial.[30] More advocacy on pharmacy roles and services on minor ailment management in Malaysia are needed to improve publics' perception and practice in this area.

For factors that may influence the publics' perception and practice towards minor ailment management in community pharmacies, respondents who visited the pharmacies more frequently were found to be more likely have a good perception and practice score of minor ailment management in community pharmacies. When a patient enters a community pharmacy, a positive rapport between the patient and the pharmacist can be established, resulting in the establishment of trust. According to a Nova Scotia study on general public, the publics' perception of pharmacists' knowledge and skills in providing extended scope services such as minor ailments management is positive, and respondents who already have a positive relationship with their pharmacist are more likely to see value in these services.[31] To build a positive relationship and trust, CPs should maintain their professionalism and provide the best care to patients. Various initiatives to increase the publics' knowledge on CPs' roles in minor ailment management and improving the CPs' proficiency, may promote the use of community pharmacies for minor ailment management, hence better utilization of health care resources.

The study subject to a few limitations. Firstly, since this is a survey study, the findings are limited to a particular time point that it neither reflects the changes nor predicts the future levels of publics' knowledge, perception and practice in minor ailment management by community pharmacies in Malaysia. Secondly, since this study was conducted as online, we may have included respondents who are more literate and have better socioeconomic as they have access to the internet. Finally, the survey may have included people who are more motivated to answer the questionnaires. Despite the limitations, this study included good number of general populations from all over Malaysia.

Conclusion

The general public in Malaysia has good knowledge about management of minor ailment by community pharmacies. Although general public was found to be amenable to the community pharmacy's position as one of the healthcare providers for the treatment of minor ailment, their perceptions and practice on minor ailment management in community pharmacy need to be further improved. More advocacies need to be done to increase the awareness of public on pharmacist's professional roles in minor ailment management to strengthen the Malaysia's healthcare system resources. Future study may want to explore how utilization of community pharmacists in management of minor ailment in Malaysia would help in better public health care resource use.

Acknowledgments

We would like to thank the respondents who have participated in this research.

We would like to thank the Director General of Health Malaysia for his permission to publish this article.

Funding

This work was supported by the Universiti Kebangsaan Malaysia Research Encouragement Grant (Centre for Research and Instrumentation) (GGP-2017-058).

Disclosure

The authors report no conflicts of interest in this work.

References

1. Fielding S, Porteous T, Ferguson J, et al. Estimating the burden of minor ailment consultations in general practices and emergency departments through retrospective review of routine data in North East Scotland. *Fam Pract*. 2015;32(2):165–172. doi:10.1093/fampra/cmv003
2. Watson MC, Ferguson J, Barton GR, et al. A cohort study of influences, health outcomes and costs of patients' health-seeking behaviour for minor ailments from primary and emergency care settings. *BMJ Open*. 2015;5(2):e006261. doi:10.1136/bmjopen-2014-006261
3. Aly M, Garcia-Cardenas V, Williams K, Benrimoj SI. A review of international pharmacy-based minor ailment services and proposed service design model. *Res Social Adm Pharm*. 2018;14(11):989–998. doi:10.1016/j.sapharm.2017.12.004
4. Welle-Nilsen LK, Morken T, Hunskaar S, Granas AG. Minor ailments in out-of-hours primary care: an observational study. *Scand J Prim Health Care*. 2011;29(1):39–44. doi:10.3109/02813432.2010.545209
5. Ayele AA, Mekuria AB, Tegegn HG, Gebresillassie BM, Mekonnen AB, Erku DA. Management of minor ailments in a community pharmacies setting: findings from simulated visits and qualitative study in Gondar town, Ethiopia. *PLoS One*. 2018;13(1):e0190583. doi:10.1371/journal.pone.0190583
6. Bennett J. Ethics: what do we have to lose? *J Indiana Dent Assoc*. 2015;94(4):14–15.
7. World Health Organization. The role of the pharmacist in self-care and self-medication: report of the 4th WHO consultative group on the role of the pharmacist, The Hague, The Netherlands, 26–28 August 1998. World Health Organization; 1998. Available from: https://apps.who.int/iris/handle/10665/65860. Accessed June 19, 2023.
8. Azhar MIM, Gunasekaran K, Kadirvelu A, Gurtu S, Sadasivan S, Kshatriya BM. Self-medication: awareness and attitude among Malaysian urban population. *Int J Collab Res Intern Med Public Health*. 2013;5(6):1.
9. Bissell P, Ward PR, Noyce PR. The dependent consumer: reflections on accounts of the risks of non-prescription medicines. *Health*. 2001;5(1):5–30. doi:10.1177/136345930100500101
10. Posey LM. Proving that pharmaceutical care makes a difference in community pharmacy. *J Am Pharm Assoc*. 2003;43(2):136–139. doi:10.1331/108658003321480669
11. Hughes E, Terry D, Huynh C, et al. Future enhanced clinical role of pharmacists in emergency departments in England: multi-site observational evaluation. *Int J Clin Pharm*. 2017;39:960–968. doi:10.1007/s11096-017-0497-4
12. Bednall R, McRobbie D, Duncan J, Williams D. Identification of patients attending accident and emergency who may be suitable for treatment by a pharmacist. *Fam Pract*. 2003;20(1):54–57. doi:10.1093/fampra/20.1.54
13. Selasawati HG, Naing L, Wan Aasim WA, Winn T, Rusli BN. Inappropriate utilization of emergency department services in Universiti Sains Malaysia hospital. *Med J Malaysia*. 2004;59(1):26–33.
14. Aminuddin WMWM, Ismail WR, Harunarashid H, Ali RA, Saiboon IM, Jaafar MJ. Utilization of emergency department, UKM medical centre: pattern of patient. *J Teknol*. 2016;78(4):1.
15. Dalton K, Byrne S. Role of the pharmacist in reducing healthcare costs: current insights. *Integr Pharm Res Pract*. 2017;37–46. doi:10.2147/IPRP.S108047
16. Paudyal V, Watson MC, Sach T, et al. Are pharmacy-based minor ailment schemes a substitute for other service providers? A systematic review. *Br J Gen Pract*. 2013;63(612):e472–81. doi:10.3399/bjgp13X669194
17. Institute for Public Health (IPH). National health and morbidity survey 2015 (NHMS 2015). Health Demand; 2015.
18. Tew MM, Hatah E, Arif F, Abdul Wahid MA, Makmor-Bakry M, Abdul Maulad KN. Geospatial analysis of distribution of community pharmacies and other health care facilities providing minor ailments services in Malaysia. *J Pharm Policy Pract*. 2021;14(1):24. doi:10.1186/s40545-021-00308-9
19. Selvaraj A, Redzuan AM, Hatah E. Community pharmacists' perceptions, attitudes and barriers towards pharmacist-led minor ailment services in Malaysia. *Int J Clin Pharm*. 2020;42(2):777–785. doi:10.1007/s11096-020-00973-x
20. Okai GA, Abekah-Nkrumah G, Asuming PO. Perceptions and trends in the use of community pharmacies in Ghana. *J Pharm Policy Pract*. 2019;12:25. doi:10.1186/s40545-019-0186-x
21. Hindi AMK, Schafheutle EI, Jacobs S. Community pharmacies integration within the primary care pathway for people with long-term conditions: a focus group study of patients', pharmacists' and GPs' experiences and expectations. *BMC Fam Pract*. 2019;20(1):26. doi:10.1186/s12875-019-0912-0
22. Bell J, Dziekan G, Pollack C, Mahachai V. Self-care in the twenty first century: a vital role for the pharmacist. *Adv Ther*. 2016;33(10):1691–1703. doi:10.1007/s12325-016-0395-5
23. Hassell K, Noyce P, Rogers A, Harris J, Wilkinson J. Advice provided in British community pharmacies: what people want and what they get. *J Health Serv Res Policy*. 1998;3(4):219–225. doi:10.1177/135581969800300408
24. Moore T, Kennedy J, McCarthy S. Exploring the general practitioner-pharmacist relationship in the community setting in Ireland. *Int J Pharm Pract*. 2014;22(5):327–334. doi:10.1111/ijpp.12084
25. Morris CJ, Cantrill JA, Weiss MC. GPs' attitudes to minor ailments. *Fam Pract*. 2001;18(6):581–585. doi:10.1093/fampra/18.6.581
26. Saramunee K, Krska J, Mackridge A, Richards J, Suttajit S, Phillips-Howard P. How to enhance public health service utilization in community pharmacy?: general public and health providers' perspectives. *Res Social Adm Pharm*. 2014;10(2):272–284. doi:10.1016/j.sapharm.2012.05.006

27. Boag L, Maclure K, Boyter A, et al. Public perceptions and experiences of the minor ailment service in community pharmacies in Scotland. *Pharm Pract*. 2021;19(1):2152. doi:10.18549/PharmPract.2021.1.2152
28. El Hajj MS, Salem S, Mansoor H. Public's attitudes towards community pharmacies in Qatar: a pilot study. *Patient Prefer Adherence*. 2011;5:405–422. doi:10.2147/PPA.S22117
29. Chui WK, Li SC. Advice-giving on self-medication: perspectives of community pharmacists and consumers in Singapore. *J Clin Pharm Ther*. 2005;30(3):225–231. doi:10.1111/j.1365-2710.2005.00637.x
30. Ruiz ME. Risks of self-medication practices. *Curr Drug Saf*. 2010;5(4):315–323. doi:10.2174/157488610792245966
31. Bishop AC, Boyle TA, Morrison B, et al. Public perceptions of pharmacist expanded scope of practice services in Nova Scotia. *Can Pharm J*. 2015;148(5):274–283. doi:10.1177/1715163515596757