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Artículos originales

## Attitude towards professional practice among community pharmacists' in Kuala Lumpur, Malaysia

Actitud hacia la práctica profesional entre los farmacéuticos comunitarios en Kuala Lumpur, Malasia

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## Abstract

**Objectives:** This study was directed to evaluate community pharmacists' attitudes towards professional practice and determine their observed competence in various pharmaceutical activities.

**Methods:** A cross-sectional study conducted in the city of Kuala Lumpur. The questionnaire contained 40 questions splitted into six sections that addressed several aspects of practice and demographic information. The study was involved in 223 licensed pharmacists who work in community pharmacies. Data were analyzed by using SPSS. Chi-square and Pearson's correlation tests were used for statistical significance for dichotomous data.

**Key findings:** Among the 233 respondents in managerial activities, 194 (87%) achieved the score good, and 5 (2.2%) had the score poor. In dispensing activities, 199 (89.2%) achieved the score good, and 5 (2.2%) had the score poor. In pharmaceutical care activities, 209 (93.7%) got the score good, and 4 (1.8%) got the score poor. In inter/intra professional activities, 108 (48.4%) got the score good, and 10 (4.5%) got the score poor. In public health activities, 153 (68.6%) got the score good, and 6 (2.7%) got the score poor whereas in the maintenance of competency activities, 160 (71.7%) got the score good, and 3 (1.3%) got the score poor.

**Conclusions:** The highest of participants got a good attitude was 93.7% for pharmaceutical care activities while the highest of participants got poor attitude was 4.5% for inter/intra professional activities. The majority of the participants are accepting the activities to maintain competence.

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**Keywords:** Community, Pharmacists, Attitude, Services, Malaysia

## Resumen

**Objetivos:** Este estudio se dirigió a evaluar las actitudes de los farmacéuticos comunitarios hacia la práctica profesional y determinar su competencia observada en diversas actividades farmacéuticas.

**Métodos:** estudio transversal realizado en la ciudad de Kuala Lumpur. El cuestionario contenía 40 preguntas divididas en seis secciones que abordaban varios aspectos de la práctica y la información demográfica. En el estudio participaron 223 farmacéuticos con licencia que trabajan en farmacias comunitarias. Los datos se analizaron utilizando SPSS. Se utilizaron pruebas de correlación de Chi-cuadrado y Pearson para determinar la significación estadística de los datos dicotómicos.

**Hallazgos clave:** Entre los 233 encuestados en actividades de gestión, 194 (87%) obtuvieron una puntuación buena y 5 (2,2%) obtuvieron una puntuación mala. En las actividades de dispensación, 199 (89,2%) obtuvieron la puntuación buena y 5 (2,2%) obtuvieron la puntuación mala. En las actividades de atención farmacéutica, 209 (93,7%) obtuvieron una buena puntuación y 4 (1,8%) obtuvieron una mala puntuación. En actividades inter / intraprofesionales, 108 (48,4%) puntuaron bien y 10 (4,5%) puntuaron mal. En las actividades de salud pública, 153 (68,6%) obtuvieron la puntuación buena y 6 (2,7%) obtuvieron la puntuación mala, mientras que en las actividades de mantenimiento de competencias, 160 (71,7%) obtuvieron la puntuación buena y 3 (1,3%) obtuvieron el puntaje pobre.

**Conclusiones:** La mayor parte de los participantes obtuvo una buena actitud fue del 93,7% para las actividades de atención farmacéutica mientras que la mayor de los participantes obtuvo una mala actitud fue del 4,5% para las actividades inter / intraprofesionales. La mayoría de los participantes aceptan las actividades para mantener la competencia.

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**Palabras clave:** comunidad, farmacéuticos, actitud, servicios, Malasia.

## Introduction

It has been suggested that the medical consultation at the primary level of healthcare has been increased tremendously in the past few decades due to two main reasons: firstly, the increased world population, and secondly the increased public awareness<sup>(1)</sup>. Pharmacists are in the frontline of contact to the public and probably the most accessible primary healthcare providers. Therefore, it is expected the community pharmacists to experience the same public attention<sup>(2)</sup>. Community pharmacists play a crucial role in providing evidence-based care and suitable medication-related services, either as prescribed medicine services or when they provide legal over the counter drugs or supplements<sup>(3)</sup>, in agreement with the guidelines of Good Pharmacy Practice (GPP) by World Health Organization (WHO), and GPP by International Pharmaceutical Federation (FIP) for both hospital and community pharmacy practice to ensure the quality of the professional service. The ultimate aim of GPP guidelines has been an improved standard and a worldwide affordable and quality pharmaceutical care<sup>(4,5)</sup>. Although the standards are globally valid, in the national level the guidelines are meant to improve the public health, medicines and medical devices supply, the patient's education and self-care, as well as the prescription of medicines<sup>(6)</sup>.

The role of pharmacists in promoting public health has been investigated by some Malaysian researchers, with a focus on the attitude of community pharmacists in Penang state<sup>(7)</sup> and else, a knowledge, attitude and practice (KAP) study from the same state among the Penang's General Hospital pharmacists<sup>(8)</sup>. The respondents of another survey in Sabah state were consumers of pharmacy services, who responded the questions about pharmacy dispensing service charges<sup>(9)</sup>. Lack of publications on the attitudes of community pharmacists about their professional practice in Kuala Lumpur, as the capital city of Malaysia, prompted us to investigate this matter. We believe shedding light on this matter will create an opportunity to identify the areas of improvement, for sake of public health concerns.

## Methodology

In this survey, a questionnaire, consisting of 40 questions was used among community pharmacists who had been selected randomly in Kuala Lumpur, the capital city that hosts around 1.8 million population<sup>(10)</sup>.

The six sections of the questionnaire address different areas of community pharmacy practice, including dispensing, managerial, pharmaceutical care, public health, and the maintenance of competence activities, as well as interprofessional relationships. To assess the attitudes of pharmacists towards each area, a Likert scale of 1 to 5 was deployed, where 1 reflected the lowest and 5 reflected the highest level of importance.

The components of demographic section included the participants' age, gender, the duration of working experience and the level of education.

The questionnaire, which is adapted from previous studies<sup>(7,12,18)</sup> was initially evaluated by face and content validity tests and reliability test with a Cronbach's alpha value of 0.93. The internal consistency was assessed in a pilot test of 15 participants, that were excluded from final analysis. The estimated time of filling in the questionnaire was 15 minutes. The data collection period was between September 2019 and January 2020. The community pharmacies were selected, based on convenience approach and the questionnaire was handed in to the community pharmacists by researcher. We used the Rao-soft online calculator (<http://www.rao-soft.com/sample-size.html>) to calculate the required sample size, knowing that 526 community pharmacists work in Kuala Lumpur<sup>(11)</sup>. The minimum number of participants for the confidence level of 95% with 5% margin of error and 50% recruitment rate was 223.

All the registered community pharmacists who were present at the workplace, when we drop by the pharmacy and agreed to participate, were included in this study. The exclusion criteria included the provisionally registered pharmacists, pharmacists on obligatory service, those whose workplace was located outside Kuala Lumpur, and unregistered pharmacists.

For statistical analysis, Statistical Package for the Social Sciences (SPSS) version 24 (IBM Corp., Armonk, N.Y., USA) was used. Descriptive analysis was deployed to calculate the frequencies and percentages. The means and standard deviations were calculated where numeric data were normally distributed and medians and IQR were generated, accordingly. The correlation between assumed independent variables and the attitudes of the community pharmacists was investigated by Pearson's Correlation tests. For categorical variables, Chi-square Goodness-of-fit determined the significance, where P-value was below 0.05. To determine the cut-off points of scorings, Bloom's cut-off point method was used. The scores obtained from all 6 sections of the questionnaire between 80% and 100% were categorized as good, between 60% and 79% as moderate, and below 60% as low<sup>(7)</sup>.

The minimum allocated score for each question was 1, and the maximum could be 5. As such, the score for the managerial section with 9 questions could vary between 9 and 45. According to Bloom's cut-off point approach, the scores over 35 could be considered as good, below 28 as poor, and in between the 2 values as moderate. In the same way, the dispensing activities section includes ten questions, which make the least possible score is ten, and the maximum score is fifty. The same method was applied to all other sections, too.

The study has received the ethics initial approval: NMRR-19-1795-49313 (IIR), Reference: KKM/NIHSEC/P19-1697(8), on 14-August-2019.

## RESULTS

The majority of respondents were female (57% of the 223 community pharmacists). The youngest age category (20 to 30 years) included 66 participants (29.6%), followed by 74 participants (33.2%) in the category of 31 to 40, 59 participants (26.5%) in 41 to 50 years category, and 24 participants (10.8%) in 51 to 60 years category. Bachelor's in pharmacy was the most frequent level of education among the participants (90.6%). Twenty participants were master's holders and one with PhD. Regarding the working experience as a pharmacist, almost 70% were placed in the category of 1 to 14 years, and the rest in 15 years and more. The demographic data of the participants are summarized in Table 1.

**Table 1.** Demographic description of the study participants (N = 223)

Variables	No. of Participants	%	P Value
Gender			0.038*
Male	96	43	
Female	127	57	
Age in Years			<.001*
20-30	66	29.6	
31-40	74	33.2	
41-50	59	26.5	
51-60	24	10.8	
Level of Pharmacist Education			<.001*
Bachelor's degree	202	90.6	
Master's degree	20	9	
PhD Degree	1	0.4	

Variables	No. of Participants	%	P Value
Professional Experience			<.001*
1-7	89	39.9	
8-14	80	35.9	
15-21	33	14.8	
22-28	15	6.7	
29-35	6	2.7	

## Managerial Activities

This part of the questionnaire that focused on the appropriate storage condition, consisted of 9 questions of which 8 were scored with a median of 4 that could be interpreted as high importance. The median of the remaining question was scored 5, very high importance. The findings are illustrated in Table 2.

**Table 2.** Numbers and percentages of participants attitude towards managerial activities

Managerial Activities	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	Median
1. Ensure pharmacy is well equipped with medicines.	0 (0)	0 (0)	5 (2.2)	109 (48.9)	109 (48.9)	4
2. Ensure that medicines are of standard quality.	0 (0)	0 (0)	21 (9.4)	131 (58.7)	71 (31.8)	4
3. Ensure appropriate storage conditions for medicines.	0 (0)	0 (0)	5 (2.2)	93 (41.7)	125 (56.1)	5
4. Ensure that the environment within the pharmacy reflects a professional setting both in terms of staff and facilities.	0 (0)	2 (0.9)	12 (5.4)	136 (61.0)	73 (32.7)	4
5. Ensuring that the pharmacy has a private area where the pharmacist can have a confidential conversation with the patient.	1 (0.4)	10 (4.5)	33 (14.8)	150 (67.3)	29 (13.0)	4
6. Ensure that the pharmacy makes a good profit.	0 (0)	2 (0.9)	17 (7.6)	154 (69.1)	50 (22.4)	4
7. Ensure in pharmacy practice the inventory is to maintain the minimum amount of necessary inventory to control drug costs and to have a sufficient supply of products for good customer service.	1 (0.4)	3 (1.3)	18 (8.1)	145 (65.0)	56 (25.1)	4
8. Ensure in pharmacy practice the appropriate management of financial resources requires an accurate, reliable and efficient system for recording and reporting financial transactions.	0 (0)	1 (0.4)	9 (4.0)	113 (50.7)	100 (44.8)	4
9. Ensure human resource is the most important aspects of pharmacy practice and it's aimed at hiring a competitive and committed staff to meet the needs of the consumers.	0 (0)	0 (0)	15 (6.7)	117 (52.5)	91 (40.8)	4

1= Very low importance; 2= Low importance; 3= Moderate importance; 4= High importance; 5= Very high importance

## Dispensing Activities

This part of the questionnaire that focused on the appropriate practice of individualized dispensing (e.g. the active intervention of the pharmacist in case of drug interactions or contraindications which obtained the highest score), consisted of 10 questions. The median score for 5 questions was 5 (very high importance), where the other 5 were scored 4 (high importance). The findings of this section are summarized in table 3.

**Table 3.** Numbers and percentages of participants attitude towards dispensing activities

Dispensing Activities		1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	Median
1.	Dispense prescription medications only against a prescription.	0 (0)	0 (0)	1 (0.4)	101 (45.3)	121 (54.3)	5
2.	Assess whether a prescription is legally valid.	0 (0)	0 (0)	1 (0.4)	102 (45.7)	120 (53.8)	5
3.	Assess the pharmaceutical and pharmacological aspects of the prescription.	0 (0)	1 (0.4)	27 (12.1)	117 (52.5)	78 (35.0)	4
4.	Assess the appropriateness of medication for individual prescription e.g. checking for contraindication, interactions etc.	0 (0)	0 (0)	5 (2.2)	92 (41.3)	126 (56.5)	5
5.	Assess that the medication is most economically available for the patient.	3 (1.3)	15 (6.7)	72 (32.3)	117 (52.5)	16 (7.2)	4
6.	Double checking the prescription before dispensing.	0 (0)	0 (0)	5 (2.2)	95 (42.6)	123 (55.2)	5
7.	Providing the patient with information regarding the medication.	0 (0)	0 (0)	8 (3.6)	91 (40.8)	124 (55.6)	5
8.	Explain that the patient how to take the medication and for how long.	0 (0)	0 (0)	5 (2.2)	117 (52.5)	101 (45.3)	4
9.	Explain the possible side effects to the patients.	0 (0)	1 (0.4)	6 (2.7)	127 (57)	89 (39.9)	4
10.	Ensure that the patient has understood the information provided.	0 (0)	1 (0.4)	8 (3.6)	147 (65.9)	67 (30.0)	4

1= Very low importance; 2= Low importance; 3= Moderate importance; 4= High importance; 5= Very high importance

## Pharmaceutical Care Activities

This part of the questionnaire consisted of 11 questions, of which 9 obtained the median score of 4 (high importance) and the rest were scored 5 (very high importance). Table 4 shows the details of the findings of this section.

**Table 4.** Numbers and percentages of participants attitude towards pharmaceutical care activities

Pharmaceutical Care Activities		1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	Median
1.	Assess patients' health related problem and medication requirements.	0 (0)	0 (0)	7 (3.1)	118 (52.9)	98 (43.9)	4
2.	Keep records about the patients' medical condition(s), medication and progress.	0 (0)	0 (0)	10 (4.5)	140 (62.8)	73 (32.7)	4
3.	Be actively involved in the selection of the most appropriate medication for the patient.	0 (0)	1 (0.4)	9 (4.0)	108 (48.4)	105 (47.1)	4

Pharmaceutical Care Activities		1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	Median
4.	Explain to patients' what he/she should expect from their medication.	0 (0)	0 (0)	35 (15.7)	149 (66.8)	39 (17.5)	4
5.	Monitor patients' progress after dispensing the medicine.	0 (0)	0 (0)	11 (4.9)	112 (50.2)	100 (44.8)	4
6.	Attempt to identify any drug related problem that patients may be experiencing.	0 (0)	0 (0)	5 (2.2)	75 (33.6)	143 (64.1)	5
7.	Plan and implement a strategy to resolve any drug related problems.	0 (0)	0 (0)	6 (2.7)	131 (58.7)	86 (38.6)	4
8.	Have a procedure in place to evaluate the progress and outcomes of treatment.	0 (0)	0 (0)	11 (4.9)	125 (56.1)	87 (39.0)	4
9.	Communicate the patient's progress on their drug therapy to their doctor.	0 (0)	0 (0)	10 (4.5)	128 (57.4)	85 (38.1)	4
10.	Refer the patient to the doctor when necessary.	0 (0)	0 (0)	7 (3.1)	74 (33.2)	142 (63.7)	5
11.	Record all professional activities in a manner that allows access to comprehensive information.	0 (0)	0 (0)	18 (8.1)	150 (67.3)	55 (24.7)	4

1= Strongly disagree; 2= Disagree; 3= Neither agree nor disagree; 4= Agree; 5= Strongly agree

### Inter/Intra Professional Activities

This part of the questionnaire consisted of 3 questions. The overall median is 4, where 23 respondents chose low importance, as Table 5 shows.

**Table 5.** Numbers and percentages of participants attitude towards inter/intra professional activities.

Inter/Intra Professional Activities		1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	Median
1.	Establish a professional relationship with doctors to enable participation in therapeutic management for patient.	0 (0)	5 (2.2)	6 (2.7)	101 (45.3)	111 (49.8)	4
2.	Consult with other pharmacists about specific patient problems.	0 (0)	8 (3.6)	16 (7.2)	146 (65.5)	53 (23.8)	4
3.	Establish communication with other health care professional to refer patients with social problems.	0 (0)	10 (4.5)	13 (5.8)	154 (69.1)	46 (20.6)	4

1= Very low importance; 2= Low importance; 3= Moderate importance; 4= High importance; 5= Very high importance

### Public Health Activities

This part of the questionnaire consisted of 4 questions. Two questions were scored with the median of 4 (high importance) and the other two were scored 5 (very high importance). The details of the findings can be seen in Table 6. One participant scored one for the option about engaging in health promotion activities.

**Table 6.** Numbers and percentages of participants attitude towards public health activities

Public Health Activities		1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	Median
1.	Be active in providing general health information to patients.	0 (0)	0 (0)	7 (3.1)	90 (40.4)	126 (56.5)	5
2.	Provide update, unbiased information on medicines to patients and doctors.	0 (0)	0 (0)	7 (3.1)	80 (35.9)	136 (60.0)	5
3.	Engage in health screening activities.	0 (0)	6 (2.7)	9 (4.0)	132 (59.2)	76 (34.1)	4
4.	Engage in health promotion activities.	1 (0.4)	5 (2.2)	18 (8.1)	145 (65.0)	54 (24.2)	4

1= Very low importance; 2= Low importance; 3= Moderate importance; 4= High importance; 5= Very high importance

### Maintenance of Competence Activities

This part of the questionnaire which focused on keeping the community pharmacists updated about the advancements in medical and pharmaceutical area, consisted of 3 questions. The first item in this section was scored with median of 4 (high competence), where the remaining 2 items were scored 5 (very high competence). The details are shown in Table 7.

**Table 7** Numbers and percentages of participants attitude towards maintenance of competence activities

Maintenance of Competence Activities		1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	Median
1.	Have access to appropriate information services.	0 (0)	3 (1.3)	3 (1.3)	122 (54.7)	95 (42.6)	4
2.	Regularly participate in continuous professional development programmes.	0 (0)	1 (0.4)	3 (1.3)	81 (36.3)	138 (61.9)	5
3.	Engage in self-assessment of competence and professional activities.	0 (0)	1 (0.4)	3 (1.3)	80 (35.9)	139 (62.3)	5

1= Very low competence; 2= Low competence; 3= Moderate competence; 4= High competence; 5= Very high competence

### Overall Scores of the Community Pharmacists Attitudes

The six indicators of the attitudes of respondents towards professional practice and attributed overall scores are shown in Table 8.

**Table 8.** Overall Attitude Score of the Participants towards Professional Practice

	Good (%)	Moderate (%)	Poor (%)	X <sup>2</sup>	df	P-Value
MA	194 (87.0)	24 (10.8)	5 (2.2)	291.399	2	<.001*
DA	199 (89.2)	19 (8.5)	5 (2.2)	314.942	2	<.001*
PCA	209 (93.7)	10 (4.5)	4 (1.8)	366.197	2	<.001*
IIPA	108 (48.4)	105 (47.1)	10 (4.5)	83.578	2	<.001*
PHA	153 (68.6)	64 (28.7)	6 (2.7)	147.507	2	<.001*
MCA	160 (71.7)	60 (26.9)	3 (1.3)	169.964	2	<.001*

Managerial Activities (MA); Dispensing Activities (DA); Pharmaceutical care; Activities (PCA); Inter/Intra Professional Activities (IIPA); Public Health Activities (PHA); Maintenance of Competence Activities (MCA)

Regarding the attitudes of the participants towards the managerial aspects of the profession, 194 respondents (87%) show a good attitude, where 24 respondents (10.8%) scored this item as moderate and only 2.2% showed a poor attitude. It can be concluded that the attitudes of the participants about this item are significantly different with a  $\chi^2$  of 291.399 ( $p$ -value 0.000).

For dispensing activities, the attitudes of 89% of the participants falls in good category, while 8.5% in moderate and 2.2% in poor categories. The difference between the scores of different categories are assessed significant, as the Chi-Square Goodness-of-fit was 314.942 and the  $p$ -value 0.000.

Overall scores of the attitudes towards the pharmaceutical care activities also follow the same pattern, in general. Of 209 participants, 94% are categorized as good level, where less than 5% and 2% fall in the moderate and poor categories, respectively. As per Table 8, the difference between the different categories found to be significant.

The lowest overall scores belong to the inter/intra professional activities with slightly below 50% in good category and almost the same percentage in moderate category. The poor category includes less than 5% of the participants. The Chi square and attributed  $p$ -value shows significance of the findings (Table 8).

The attitudes of the participants regarding the involvement in public health activities obtained an overall good response by 68.6%. The moderate and poor categories included 28.7% and 2.7%, respectively. The observed Chi-Square  $p$ -value confirms the significance of the difference between the 3 different categories, as per Table 8.

Finally, the attitudes of nearly 72% of the 160 participants falls in good category in terms of the maintenance of competence activities section, whereas about 27% fall in moderate and less than 1.5% in poor category. The analysis of the Chi square and  $p$ -value is in favour of significance (Table 8).

The Pearson Correlation was applied to the findings and it was observed that there is a significant correlation with weak positive relationship between the participants' attitudes and pharmaceutical care activities, as well as the maintenance of competence activities ( $r = 0.188$ ;  $p < 0.01$ ).

## Discussion

Our study shows the positive attitudes of the community pharmacists who participated in this study, towards different aspects of pharmacy practice, in general. As literature reveals, the American pharmacists have similar attitudes about the importance of managerial activities, as a key responsibility<sup>(13)</sup>. Some of the components of the managerial activities, such as the contribution of community pharmacists in drugs appropriate storage conditions, had received similar level of attention by other studies from Malaysia and India<sup>(7,14)</sup>. The importance of proper storage conditions and their connection with the therapeutic efficacy of the products to be supplied may explain similar findings<sup>(15)</sup>.

The present study did not show a positive attitude to the option that implied the importance of the pharmacist's role in proposing the best economic option to the customers, this attitude could be further investigated by the concerned authorities to explore which are the preferences in the prospective of the pharmacists other than cost. A study from the Republic of Moldova found the same attitude among the participants<sup>(18)</sup>.

The high tendency of the participants of this study towards the dispensing activities is in line with a study from India that reports almost 78% of the respondents identified dispensing as the sole responsibility of a pharmacist<sup>(16)</sup>. The medication errors that may take place due to the illegibility of prescriptions have been an important concern, as more than one-third of community pharmacists who participated in a survey considered it as one of the contributing parameters in medication errors<sup>(17)</sup>.

Another survey from Malaysia found out the same positive attitude of the community pharmacists towards the managerial roles and dispensing responsibilities<sup>(7)</sup>. It seems the community pharmacists are well aware of their role in terms of properly practicing of dispensing to ensure the safety of the patients on one hand and the adherence to the guidelines and pertinent regulations on the other hand.

Malaysian community pharmacists do not charge the customers for counselling. Despite the fact, our participants' view has been quite positive regarding the free service. The same findings were reported from Nigeria and Jordan, previously<sup>(19,20)</sup>, probably Malaysian pharmacists consider this free service a part of the pharmacists' duties and a tool to strengthen the relationships with their customers. However, the Saudi community pharmacists did not show positive feedback about the counselling and pharmaceutical care services if it is unpaid<sup>(21)</sup>. Specifically, two questionnaire items of the pharmaceutical care activities have been positively scored by the participants of the current study. The first is about the importance of reminding the adverse effects of the drugs in case any misuse is identified. This is consistent with a study from Saudi Arabia<sup>(22)</sup>. The second item is about the referral of the patient to a relevant physician, when necessary. Similar positive findings have been reported by previous studies from Malaysia and the Republic of Moldova<sup>(7,18)</sup>. The highly positive attitudes of pharmacists in this area is in line with the vital role of community pharmacists in early detection of some serious medical conditions or drug adverse effects and so on. However, the level of this positive attitude has not been as high as our participants in a survey conducted in Penang, Malaysia (94% versus 64.4%)<sup>(7)</sup>.

The positive attitude of the majority of the participants of this study regarding pharmaceutical care activities would matter especially when the working space of the respondents is taken into account. It is expected that the pharmacists who work in the capital city face the highest workload and busiest schedule. Perhaps this can explain why a small fraction of the participants scored low in this section of the questionnaire, such an attitude could encourage stakeholder to consider hiring more the one pharmacist in areas where the population density is higher.

Compared to the previous section, the attitudes of the respondents were not so positive about the inter- and intra-professional activities. The finding is consistent with the survey from Penang, Malaysia<sup>(7)</sup>. The pattern of relationship between pharmacists and the other healthcare providers, especially physicians, as well as the individual experiences of pharmacists in this context may explain the situation. Although the context is very different, the findings of a study from Germany probably clarifies some of the pharmacists' concerns, where they shared their unpleasant personal experiences. They requested for clear, predefined, and straightforward means to communicate with other healthcare providers. Based on the goal of achieving better treatment results for patients, effective and rapid communication means must be found between doctors and pharmacists such as mobile applications<sup>(23)</sup>.

The contribution of community pharmacists in public health activities was responded very positively. This shows that pharmacists are willing to experience new areas. Some other studies<sup>(7,24)</sup> have reported the same willingness. The willingness of Indian and Moldavian pharmacists, however, has been reported lower about participating in public health activities<sup>(14,18)</sup>. The fact that the community pharmacists are among the most accessible healthcare providers and the service is usually free of charge is in contrast with the moderate or poor attitude of a fraction of community pharmacists. This can be explained to some extent by reasons like high workload, lack of time, poor patients' response, etc<sup>(25)</sup>. Several surveys from Malaysia and other countries, however, show positive attitudes of community pharmacists towards public health activities<sup>(20,26,27)</sup>. A study from Penang, Malaysia also shows the positive attitude and willingness of pharmacists to take part in public health activities and awareness campaigns<sup>(7)</sup>. Based on the positivity of community pharmacists to participate in community health activities, these efforts can be invested to raise health awareness among community members, for example, pharmacists can participate in mobile clinics targeting remote areas.

Having a positive attitude towards pharmaceutical care and public health activities may not end up with competency in the pharmacy profession unless pharmacists are life-long learners with a passion to be updated in their daily practice. The positive attitude of the participants of the current study towards the maintenance of competence activities is in line with other reports from Malaysia, Canada, and Lebanon<sup>(7,12,28,29)</sup>. The response of our participants to the questions about continuous professional development programmes and self-assessment activities fall in the category of very high importance. The Moldavian pharmacists, however, showed a moderate willingness in this regard. The authors justified that the compulsory continuous educational programmes which is a legacy of the Soviet Union era could be the reason for this level of attitude. Other researchers from Lebanon proposed other reasons such as the traveling distance, time constraints and job restrictions<sup>(29)</sup>.

The consistency and correlation between the pharmacists attitudes towards the pharmaceutical care activities and competence activities which is reported by the current study, is in line with another survey from Eastern Malaysia that reported a very positive attitude of the local pharmacists about the same activities<sup>(30)</sup>. This consistency between the attitude toward the pharmaceutical care activities and competence activities could inspire the concerned authorities to emphasize more on pharmaceutical care activities in its program which could improve the attitude of the pharmacists to pharmaceutical care activities.

After reviewing the attitude of Malaysian pharmacists in Kuala Lumpur toward various of professional activities, the developing a general framework to improve the professional attitude of community pharmacists in all different backgrounds and environments remains a necessary task to be done by researchers. Meanwhile, the professional bodies and pertinent policymakers need to exert needed changes to improve the area.

## Conclusion

The attitudes of community pharmacists towards the main elements of the profession of community pharmacy were investigated in Kuala Lumpur, Malaysia. The overall attitude of the pharmacists is assessed as positive towards most of the selected indicators. It was found that the willingness of pharmacists to participate in those professional activities could be affected negatively by factors like high workload and lack of time. The barriers may vary from country to country, or area to area, depending on the cultural, educational, or social background.

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