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Public awareness, expectations, and views on community pharmacist's roles and practices in the Philippines

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Abstract

Community pharmacists have been identified as an accessible source of drug information for both patients and other healthcare professionals. Over the years, the role and practices of community pharmacists have developed from drug-based activities to patient-centered healthcare. Although most patients have considered community pharmacists the initial point of contact for their medication-related concerns, they remain underutilized healthcare professionals who have become almost invisible to the public despite their efforts. This study was conducted to ascertain the public's awareness, expectations, and views of the roles and practices of community pharmacists in the Philippines. A descriptive quantitative and qualitative cross-sectional research design was employed; a self-made questionnaire was utilized among the 315 respondents selected through non-probability convenience sampling. For data analysis, descriptive statistics and the Chi-square approach were employed. Significant associations were defined as those with $p < 0.05$. Most of the respondents visit a community pharmacy 2-3 times a month (39.58%) to buy prescription medicines (73.02%) due to its reasonable price (74.60%). The majority ($\bar{x}=3.765$) agreed that they had considered community pharmacists as an integral part of the healthcare system and expected them to respond to drug-related questions ($\bar{x}=3.686$) and view them to be knowledgeable enough to attend to their concerns ($\bar{x}=3.613$). The educational attainment of the respondents and their expectations on the roles and practices of community pharmacists were found to be significantly associated with the study ($p=0.026$). The public has presented an overall positive awareness, expectations, and views toward the roles and practices of community pharmacists.

Keywords: Awareness; Expectations; Views; Community Pharmacist; Roles; Practices

1. Introduction

Pharmacists have been known as experts in the selection, preparation, handling, and proper use of medications, and more recently in ensuring that drugs provide the patient with the best possible outcome. However, one of the most commonly encountered areas of pharmacy practice is pharmacists who work in the communities. It allows the public to access their respective medications and ask for health advice from a pharmacist at the same time as they are taking them [1].

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In the community setting, pharmacists incorporate patient counseling by educating patients regarding their disease, such as explaining probable side effects, encouraging medication adherence, guaranteeing accurate dosing, and suggesting alternative medications concerning drug prescriptions [2].

Low and middle-income countries, which include Malaysia, Indonesia, and the Philippines, are among the nations that are often considered to have underdeveloped community pharmacy practices [3]. In the Philippines, the majority of customers primarily view community pharmacists as simple drug sellers rather than drug therapy advisors.

Understanding the expectations, needs, and satisfaction of the public will be a key factor in the advancement of the pharmacy practice and service which will allow significant improvement in the patient-customer and pharmacist relationship. Thus, the purpose of this study is to determine the public awareness, expectations, and views on the roles and practices of community pharmacists in the Philippines.

2. Material and methods

A descriptive quantitative and qualitative cross-sectional research design was employed to determine the public awareness, expectations, and views towards community pharmacists' roles and practices in the Philippines. From the general public of the Philippines, participants were selected using a non-probability convenience sampling technique. A self-administered survey questionnaire modified from previously conducted and validated research was utilized in this study. The questionnaire is divided into four sections based on the variables as well as their relation to their socio-demographic characteristics. To assess the respondents' level of agreement, a 4-point Likert scale was utilized. The survey questionnaire was disseminated via e-mails, direct messages, and social media platforms for a wide audience reach. Data obtained were assessed and evaluated using descriptive statistics through frequency, mean, and weighted mean. The Chi-square method was used to examine the association between the categorical variables and the awareness, expectations, and views of the participants.

3. Results and discussion

This chapter covers an in-depth demonstration and illustration of the process of analyzing data and the outcomes of the study. These are discussed through the presentation of tables. The study's objectives are also discussed, including how the researchers delimited the coverage of the study, and the structure and course of the study are precisely explained throughout this chapter.

3.1. Socio-Demographic Profile of the Respondents

This section consists of the socio-demographic profile of the 315 respondents and has been the subject of statistical analysis using frequency and percentage. The following data is presented below:

Table 1 Summary Statistics of the Respondent's Socio-Demographic Profile

Socio-demographic Profile	Frequency (f) 315	Percentage (%)
Age		
18-24 years old (Gen Z)	63	20.00
25-40 years old (Millennials)	63	20.00
41-56 years old (Gen X)	63	20.00
57-66 years old (Boomers II)	63	20.00
67 years old and above (Boomers I)	63	20.00
Gender		
Male	112	35.56
Female	203	64.44
Highest educational level/attainment		
Elementary	11	3.49

High School	64	20.32
College	232	73.65
Not Applicable	8	2.54
Employment Status		
Employee	121	38.41
Self-Employed	59	18.73
Not Applicable	65	20.63
Monthly Income		
Less than ₱11,000	121	38.41
₱11,000 - ₱21,999	59	18.73
₱22,000 - ₱43,999	65	20.63
₱44,000 - ₱76,999	37	11.75
₱77,000 - ₱131,000	22	6.98

Table 1. Shows the socio-demographic profile of the respondents in terms of age, gender, highest educational level/attainment, employment, and monthly income. The age of the study population was divided into 5 categories: Gen Z, Millennials, Gen X, Boomers II, and Boomers I, to facilitate equal distribution. Of the 315 respondents, there were a total of 63 (20%) respondents for each category. Females had a higher percentage (73.65%) than males (35.56%). The majority of the respondents had a high educational level of completion of college with a total response of 232 (73.65%). Meanwhile, 11 respondents (3.49%) were only able to finish elementary school, while 8 of them (2.54%) answered “not applicable,” which indicates that they weren't able to finish elementary school or hadn't had any access to formal education at all. According to Madaleno, people with low educational levels are more likely to resort to using natural remedies and herbal supplements rather than using modern medications [4]. Looking at the overall employment status of the respondents, 106 (33.65%) of them are currently employed in a company, 79 (25.08%) are self-employed, and 130 (41.27%) answered “not applicable” which means that they are either students or unemployed. Lastly, a total of 121 respondents (38.41%) had an income of less than ₱11,000, while 22 respondents (6.98%) had an income of ₱77,000 - ₱131,000. The majority of respondents, according to the Philippine Institute for Development Studies (PIDS), are categorized as poor, although some respondents are categorized as rich [5].

3.2. Respondents' Pattern for Visiting the Community Pharmacy

This section shows the respondents' frequency, reasons, and influential factors that affect their choice of selecting and visiting a certain community pharmacist.

Table 2 Summary of the data on Respondents' Frequency of Visiting a Community Pharmacy

Frequency of visiting a community pharmacy	Frequency (f)	Percentage (%)
Once a day or more often	8	2.54
Once a week	46	14.60
More than once a week	33	10.48
2-3 times a month	125	39.68
Once every 2-3 months	66	20.95
2-5 times a year	37	11.75
Total	315	100

Table 2. Presents the data regarding the visiting patterns of the respondents based on how frequently they visit a community pharmacy. As seen in the table above, 125 respondents with an equivalent percentage of 39.68% visit a community pharmacy 2-3 times a month. On the other hand, obtaining the lowest percentage of 2.54%, only 8 respondents visit a community once a day or more often. The outcome demonstrates that community pharmacies receive frequent visits from the general public because they are easily accessible and because people expect to receive personalized health and medication advice from pharmacists when they walk in without an appointment. Furthermore, numerous studies on community pharmacists reveal that they are the most frequently visited healthcare facilities [6].

Table 3 Summary of the data on Reasons for Visiting Any Community Pharmacy

Reasons for visiting any community pharmacy	Frequency (f)	Percentage (%)
To ask for a pharmacist's advice	55	17.46
To purchase cosmetic products	84	26.67
To purchase baby care products	28	8.89
To purchase prescription medication	230	73.02
To purchase nonprescription medications	198	62.86
To purchase food supplements, e.g., multivitamins, fish oil, vitamin D, etc.	226	71.75
To purchase monitoring devices, e.g., blood pressure devices and blood glucose meters	50	15.87
Total	315	100

Table 3. Presents the responses of individuals when asked about the reasons for their frequent visits to any community pharmacy. The majority of participants, as seen in the table above have a 73.02% and a frequency of 230 visits to community pharmacies to obtain prescription medication. In addition, a close percentage of 71.75% with a frequency of 226 participants visiting the community pharmacy to purchase food supplements. Purchasing baby care products, on the other hand, is the least frequent purpose of going to community pharmacies. It obtained a low percentage of 8.89% and a frequency of 28. According to Aljadhey, et al., the most common reason for patients buying medications in a community pharmacy is to reduce cost and lessen the frequency of going to the doctor, especially when the symptoms of their illness are very minor, which often results in self-medication. Most individuals practice self-medication to maintain their good health and manage their minor illnesses [7].

Table 4 Summary of the data on Factors that Influence the Choice of Any Particular Community Pharmacy

Factors that influence the choice of any particular community pharmacy	Frequency (f)	Percentage (%)
Reasonable prices	235	74.60
Parking space availability	78	24.76
Aesthetic of the pharmacy	27	8.57
Confidentiality and privacy	56	17.78
Convenient pharmacy opening hours (24/7)	210	66.67
Wide range of products and additional services	184	58.41
Proximity to home, workplace, or shopping mall	193	61.27
Pharmacist knowledge and ability to answer any drug- or disease-related question	123	39.05
Accommodating pharmacy staff (Pharmacist, pharmacy assistant, pharmacy technician)	141	44.76
Total	315	100

Table 4. Shows the results of the responses concerning the factors that influence the respondent's choice of any particular community pharmacy. As presented in the table, garnering a total of 235 responses with an equivalent percentage of 74.60%, the majority of the respondents consider reasonable prices of the products and medications when visiting a community pharmacy. It is closely followed by the convenient pharmacy opening hours (24/7) with 210 responses and an equivalent percentage of 66.67%. Meanwhile, obtaining the lowest percentage of 8.57%, only 27 respondents consider the aesthetics when visiting a community pharmacy. According to Driwale, et al., a person's choice when selecting a community pharmacy is heavily influenced by reasonable costs, practical opening hours, helpful staff, and a wide selection of items [8]. In another study conducted by El Hajj et al., the community pharmacy's convenient location, the friendliness of the personnel, and its convenient opening hours are the most frequent factors that influence a patient's decision [9]. This suggests that it is necessary to regulate and maintain the costs of the goods offered, adjust to a flexible opening schedule, and instruct the pharmacy staff on providing excellent customer service.

3.3. Respondent's Awareness on the Subject

This section shows the respondents' awareness of the roles and practices of community pharmacists, awareness of confidence and trust in community pharmacists, and awareness of current community pharmacy services which were statistically analyzed using weighted mean and standard deviation. The table below displays the data.

Table 5 Summary of the data on the Roles and Practice of the Community Pharmacist

Respondent's awareness on the roles and practices of the community pharmacist	Weighted Mean	Standard Deviation
An expert in drug therapy management	3.619	0.576
A professional in suggesting treatment for minor ailments	3.540	0.682
An integral part of the healthcare system	3.765	0.494
Dispensers and drug advisers	3.635	0.584
A reliable source of correct drug information during patient counseling	3.654	0.606
Overall	3.643	0.595

Table 5. Illustrates the results in the sector of the respondent's awareness on the roles and practices of the community pharmacist wherein community pharmacists are perceived as an integral part of the healthcare system which ranked as 1 and had a total of 249 respondents above all the given choices with a weighted mean of 3.765 and a standard deviation of 0.494. On the other hand, a professional suggesting treatment for minor ailments ranked last and obtained 198 respondents with a weighted mean of 3.540 and a standard deviation of 0.682. The result shows that the public is aware that pharmacists are an integral part of the healthcare system since, pharmacists have the task of providing effective, safe, and high-quality medicines and services to achieve optimal health outcomes. Thus, pharmacists must have current knowledge and core competencies in order to tailor information and advice to their patients.

Table 6 Summary of the data on Confidence and Trust in Community Pharmacists

Respondent's awareness on confidence and trust in community pharmacists	Weighted Mean	Standard Deviation
Always treats me with respect	3.660	0.543
Shows qualities that can be trusted	3.698	0.512
Has the ability to answer my questions with regards to drug therapy management	3.565	0.601
Is the first healthcare professional I approach whenever I encounter a problem with my medication/s	3.108	0.921
Overall	3.508	0.705

Table 6. Shows the results in the awareness on confidence and trust in community pharmacists. The community pharmacist shows qualities that can be trusted and has the highest response where this area obtained a weighted mean of 3.698 and a standard deviation of 0.512. One of the responsibilities of a community pharmacist is to acquire the trust of the people to establish relationships and connections and improve patient-centered communication skills. Meanwhile, the community pharmacist, who is the first healthcare professional I contact when I have a medication problem, has the fewest responses, with a weighted mean of 3.108 and a standard deviation of 0.921. In the Philippines, most people lack knowledge about the roles and responsibilities of community pharmacists hence, when they encounter problems with their medications, one factor is that they tend to search for information through the internet regarding their medicines and diseases [10]. While the public is aware that community pharmacists show qualities that can be trusted and treat them with respect, another probable explanation for this finding could be the society's traditional belief that physicians' knowledge and skills make them the dominant professionals in the health care system. It can be attributable to the fact that some respondents were deterred from consulting with pharmacists as the first-line healthcare providers they seek whenever they experience a problem with their medicine or medications due to prior negative experiences.

Table 7 Summary of the data on Current Community Pharmacy Services

Respondent's awareness on current community pharmacy services	Weighted Mean	Standard Deviation
Provides extended services such as Health screening services; BP monitoring, and blood sugar monitoring mainly in the community pharmacies	3.029	0.925
Counsels me with disease management	2.956	0.940
Gives me advice on minor ailments	3.349	0.809
Performs proper screening and monitoring for specific health conditions and diseases	3.035	0.886
Overall	3.092	0.903

Table 7. Shows the results in the subject awareness of current community pharmacy services of pharmacists. The community pharmacist that advises on minor ailments has the highest weighted rate in this area with a weighted mean of 3.349 and a standard deviation of 0.809. Pharmacists are medical professionals that can assist you with minor health issues. Meanwhile, community pharmacists that do health screening services; BP monitoring, and blood sugar monitoring mainly in the community pharmacies have the lowest weighted rate among responses where it has a weighted mean of 2.946 and a standard deviation of 0.940. Community based-screenings should be enhanced to detect comorbidities to obtain knowledge with regards to a patient's illness or disease. The result shows that the public is aware of current community pharmacy practices such as community pharmacists advising on minor ailments. As qualified healthcare professionals, they can offer clinical guidance and over-the-counter medications for a range of minor illnesses, such as coughs, colds, sore throats, digestive issues, and aches and pains. However, the public has minimal awareness of community pharmacists' other services such as patient counseling and disease management. This implies that patient counseling needs to be given greater emphasis in community pharmacies.

3.4. Respondents' Expectations for Extended Services Provided

The respondents' expectations of the provided extended services in community pharmacies were statistically analyzed using weighted mean and standard deviation. The results are presented in the table below.

Table 8. Summarizes the weighted mean and standard deviation of the respondents' expectations for extended services provided in community pharmacies. Obtaining the highest weighted mean of 3.686 and the lowest standard deviation of 0.553, 227 respondents strongly agreed that they expect community pharmacists to answer their drug-related questions and provide drug information. This result is in line with the way that the participants see community pharmacists as experts in drug therapy management and reliable source of correct drug information. Meanwhile, being able to vaccinate and immunize patients is the least expected extended service in community pharmacies with only 130 respondents answering strongly agree, garnering a weighted mean of 3.092 and a standard deviation of 0.924. In a similar study conducted by Anderson et al., the rates of awareness of community pharmacists' clinical services were low with community pharmacists being able to vaccinate and immunize [11]. This indicates that the public may be unaware that community pharmacies provide such extended services, thus, they usually choose clinics or hospitals to be vaccinated.

Table 8 Summary of the data on Respondents' Expectations for Extended Services Provided

Expectations for Extended Services Provided	Weighted Mean	Standard Deviation
Answer my drug-related questions/drug information	3.686	0.553
Advise me on minor ailments	3.521	0.702
Perform proper screening and monitoring for specific health conditions and diseases	3.263	0.816
Be able to vaccinate and immunize	3.092	0.924
Monitor my health progress to ensure the safe and effective use of medications and help in medication management therapy	3.263	0.876
Maintain patients' medical records	3.184	0.926
Overall	3.335	0.835

3.5. Respondents' Views toward Community Pharmacist Roles and Practices

The views of respondents on the roles and practices of community pharmacists are presented in this section, which has undergone statistical analysis with the use of the weighted mean and the standard deviation. The data that follow are shown below.

Table 9 Summary of the data on Respondents' Views toward Community Pharmacist Roles and Practices

Respondents' Views toward Community Pharmacist Roles and Practices	Weighted Mean	Standard Deviation
I could ask for extended services like health screening services such as BP monitoring	3.063	0.932
My pharmacist validates and assesses the prescription before dispensing the drug to the patient	3.587	0.644
Privacy concerning my prescription is maintained by the pharmacist	3.581	0.645
The pharmacist provides me with thorough medication counseling and encourages me to ask questions	3.251	0.865
The pharmacist is knowledgeable enough and always ready to answer my drug-related question	3.613	0.630
Overall	3.419	0.786

Table 9. Presents the findings of the responses associated with the views on the roles and practices of community pharmacists wherein community pharmacists are knowledgeable enough and always ready to answer any drug-related questions that fall under 1 and has a total of 214 respondents primarily of the given selections with a weighted mean of 3.613 and a standard deviation of 0.630. On the other hand, the demand for extensive services like health screenings such as BP monitoring was last ranked and garnered 128 respondents with a weighted mean of 3.063 and a standard deviation of 0.932. The public may not be aware that community pharmacists offer these wide-ranging services, therefore, they typically select other healthcare providers such as nurses to conduct these health screenings. This implies that there is a minimal view of such services being available in community pharmacies and that people would prefer to go to general practitioners and hospitals for screening services. To improve these services, training should help to increase pharmacists' confidence in offering public health services in community pharmacies. Pharmacists who are competent and well-trained should be able to provide proactive public health services, which probably enhance patient attitudes and health.

3.6. Association of the respondents' socio-demographic profile and their awareness, expectations, and views on the roles and practices of community pharmacists.

A Chi-Square test with an alpha of 0.05 and a confidence level of 95% was used as a test of statistical independence among categorical variables between the public's socio-demographic profile and their awareness, expectations, and views on the roles and practices of community pharmacists. A p-value greater than 0.05 ($p > 0.05$) indicates a no significant association, while p-value of less than 0.05 ($p < 0.05$) indicates a significant association among variables.

Table 10 Results of Pearson Chi-Square test between respondents' socio-demographic profile and their awareness of community pharmacist roles and practices

Variables	Value	df	P-Value
Age	4.378 ^a	12	0.976
Highest Educational Attainment	5.566 ^a	9	0.782
Employment Status	11.592 ^a	6	0.072
Monthly Income	21.071 ^a	15	0.135

A p-value greater than 0.05 ($p > 0.05$) indicates a no significant association, while p-value of less than 0.05 ($p < 0.05$) indicates a significant association among variables.

Table 10. Shows that the resulting values of the respondent's age ($p = 0.976$), highest educational attainment ($p = 0.782$), employment status ($p = 0.072$), and monthly income ($p = 0.135$) through a p-value have values greater than 0.05. Hence, this indicates that there is no significant association found between the respondent's socio-demographic profile and the public's awareness of community pharmacists' roles and practices in the Philippines. This study shows that socio-demographic variables of age ($p = 0.976$), revealed that there was no significant association in awareness of community pharmacists' roles and practices. Pattanaik, Mishra, and Moharana indicated that proximity to home or frequency of visits is not significantly associated with age or level of education [12]. The results of this study revealed that 59.7% of the participants knew little or nothing about the functions of community pharmacists.

Table 11 Results of Pearson Chi-Square test between respondents' socio-demographic profile and their expectations toward community pharmacist roles and practices

Variables	Value	df	P-Value
Age	12.658 ^a	12	0.394
Highest Educational Attainment	18.933	9	0.026
Employment Status	2.205 ^a	6	0.900
Monthly Income	11.925 ^a	15	0.685

A p-value greater than 0.05 ($p > .05$) indicates a no significant association, while p-value of less than 0.05 ($p < .05$) indicates a significant association among variables.

Table 11. shows that the p-values for the respondent's age ($p = 0.394$), employment status ($p = 0.900$), and monthly income ($p = 0.685$) are all greater than 0.05, implying that there is no significant relationship between these socio-demographic factors and public expectations of community pharmacist roles and practices in the Philippines.

Age, monthly income, and employment status were not shown to be significantly associated with the public's expectations in a prior Kuwaiti study. In the same study, respondents' expectations about the job of the community pharmacist were found to have a substantial impact on respondents' gender and residence, with people living in high-density areas having the highest expectations of pharmacists [13].

On the other hand, it demonstrates that the value of respondent's highest educational attainment ($p = 0.026$) has a p-value less than 0.05, indicating that there is a significant association discovered between socio-demographic highest educational attainment and the public's expectations on community pharmacists' roles and practices in the Philippines. Among all the variables, only the public with the highest educational attainment is associated with the expectations toward community pharmacy, which signifies that these variables are determined and those with higher education have

more expectations towards pharmacists in the future. People with higher education can effectively address these challenges and know the purpose of higher education and what to expect for future work or as professionals.

Table 12 Results of Pearson Chi-Square test between respondents' socio-demographic profile and their views toward community pharmacist roles and practices

Variables	Value	df	P-Value
Age	18.161 ^a	12	0.111
Highest Educational Attainment	7.182 ^a	9	0.618
Employment Status	6.100 ^a	6	0.412
Monthly Income	12.958 ^a	15	0.606

A p-value greater than 0.05 ($p > .05$) indicates a no significant association, while p-value of less than 0.05 ($p < .05$) indicates a significant association among variables

Table 12. Presents the correlation between respondents' socio-demographic profile in terms of age, highest educational level/attainment, employment, and monthly income and their views towards community pharmacist roles and practices. The relationship between respondents' views towards community pharmacist roles and practices and their age ($p = 0.111$), highest educational attainment ($p = 0.618$), employment status ($p = 0.412$), and monthly income ($p = 0.606$), all have p-values greater than 0.05. Therefore, the results of the study suggest that there was no statistical association among the independent variables. The public's perceptions of community pharmacists by age, gender, or educational level were not found to be significantly influenced by any of these factors, according to research conducted in Palestine. In the same study, about 33.9% of the respondents view community pharmacists as more involved in business matters than in health care matters [14]. Regardless of their sociodemographic profile, 390 respondents in a different study done in Oman were found to have a positive level of perception regarding the roles and services provided by pharmacists. The gender, age, and educational qualification of the participants did not show any significant association in their views [15].

4. Conclusion

In conclusion, the research has indicated that there is indeed public awareness on the roles and responsibilities of a community pharmacist in the Philippines particularly in providing pharmaceutical services including dispensing medicinal drugs and giving reliable drug information indicating that the public had a good understanding of how to view and what to expect from a community pharmacist. However, public knowledge is limited only to particular roles but does not include extended health services offered by community pharmacists such as immunization and drug monitoring services.

Based on the findings of the study, there is no significant association between the respondents' socio-demographic profile and their awareness, expectations, and views on the roles of community pharmacists. Although there seems to be an association between the respondent's expectations and their corresponding highest educational attainment. Multiple studies have shown that people with low educational levels are more likely to resort to using natural remedies and herbal medications.

Overall, the present findings highlight the need for continuing education programs to provide community pharmacists with the necessary knowledge and skills to satisfy the pharmacy practice's ever-changing needs. Providing extended health services and giving additional screenings to the community must be prioritized to create an impact on the community. It's worth noting that there's an apparent need to improve and raise public awareness about community pharmacists' knowledge, skills, and position as pharmaceutical care providers, as well as to develop locations with more privacy to foster and encourage pharmacist-patient discussion.

Compliance with ethical standards

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Disclosure of conflict of interest

The authors confirm that there is no conflict of interest.

Statement of ethical approval

The authors confirmed that the study protocol and informed consent underwent and approved by the Institutional Ethics Review Board.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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