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The Perception of Community Pharmacists in Lipa City, Batangas in Taking the Role of Being One of the Vaccinators

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Abstract

Vaccines are considered as primary prevention that enables our body's immune system to be protected against pathogens that cause infection. Despite vaccine efficacy and availability in many parts of the world, reducing the incidence and occurrence of vaccine-preventable diseases requires maintaining a high level of vaccine uptake among the population. Pharmacists, being one of the competent healthcare professionals could also be the vaccinators. The purpose of this study was to determine the perceptions of community pharmacists in Lipa City, Batangas, toward serving as vaccinators and to provide information about the scope of practice that allows pharmacists to administer an immunization. The researchers used self-administered questionnaires as the main instrument in evaluating the pharmacists' knowledge and views about being one of the vaccinators. The sample population of twenty (20) community pharmacists in Lipa, City Batangas is the total subjects who are willing to participate in the research. Based on the result, the critical factors for implementing vaccination services must primarily focus on establishing cooperation between pharmacists and health centers. Community pharmacists in Lipa City, Batangas, claim that two key reasons justify their readiness to provide vaccination services: community pharmacies are readily available to patients, and community pharmacies may play a significant role in vaccination advertisement and promotion. The main findings have shown that a shortage of training courses is most likely the obstacle preventing people from being ready to provide vaccination services.

Keywords: Perception, Pharmacy Practice, Readiness

Introduction

Due to the pandemic, the government had a Senate hearing about vaccination programs. Sen. Richard Gordon doubted the DOH's ability to vaccinate millions of Filipinos, citing the DOH's data of only 617,239 healthcare professionals. Gordon then advocated that more vaccinators be trained and, as a result, DOH USec. Dr. Myrna Cabotaje together with FDA Director-General Eric Domingo is now discussing plans to include midwives and pharmacists as one of the vaccinators for Covid-19 vaccines (Hallare, K. 2021, January 17). Vaccination policies vary across the world, strategic and integrated partnerships between healthcare professionals are increasingly common and the role of pharmacists as educators, facilitators, and vaccinators is becoming more readily recognized (Rosado, D., Bates, P., Pyzik, O., Pinto, G., & Besançon, L. 2016). Since the pharmacy law allows pharmacists to perform vaccinations, they took advantage of the opportunity to include vaccine delivery as one of the pharmacist's responsibilities; however, it could only happen if all the pharmacists are under the supervision of a physician (Hallare, K. 2021, January 17). Pharmacists have many significant roles in the healthcare system, they are not just "selling" medications but rather, they are the ones who are responsible for the provision of safe, effective, and quality pharmaceutical products, drug information including its adverse effects, patient medication counseling, health promotion, and other various pharmaceutical services (Rosado, D., Bates, P., Pyzik, O., Pinto, G., & Besançon, L. 2016). Thus, they are also one of the medical field's backbones. Being a pharmacist is indeed an ideal profession to be, with their competency, productivity, and even the ability to excel in different aspects, not just in the field of pharmacy practice locally but also globally. With all the characteristics that pharmacists possess, there is no doubt that they are going to do a great job if the government as well as other health-affiliated organizations like DOH and FDA finally decided to let them become one of the vaccinators.

Vaccines are known to be a crucial part of our lives and are also considered as primary prevention that enables our body's immune system to be protected against pathogens that cause infection. Through vaccination, there is a way of helping our immune system to be able to recognize and eliminate an organism, allowing our bodies to be prepared if ever exposed. In fact, according to an article written by Amy Boulanger (2019), these vaccines are considered safe and effective because they have undergone rigorous testing and many rounds of clinical study, examination, as well as

research before they are even used with the general public. Aside from this, one advantage of vaccines is that researchers closely examine each vaccine before presenting the data to the Food and Drug Administration (FDA) to determine whether or not it can be approved. However, we must keep in mind that the safety and effectiveness of a vaccine just not depends on how long or how thorough the research and other processes were made but it also depends on the proper administration as well as the capability of the healthcare professional to administer a vaccine. Another article from the Centers for Disease Control and Prevention (2018), states that it is recommended that before administering vaccines, all healthcare professionals must obtain competency-based guidance on vaccine management policies and procedures. To be able to extend the capacity of the medical team, comprehensive and skill-based training should be integrated, specifically now, that we are amid the pandemic and there is an increasing need for healthcare professionals who could be able to administer vaccines to all the people in a given time frame. Pharmacists, being one of the competent healthcare professionals could also be the vaccinators. According to Yvette Terrie (2010), it is indeed true that it is still up to a patient's choice to decide whether or not to receive vaccines, however, pharmacists can serve as an instrument in providing patients with appropriate information about the benefits as well as the risks when it comes to vaccinations. Pharmacists are also assumed to be in a great position to determine patients who are in target groups for such vaccines, and they may also be able to alleviate the patient's fears by sharing knowledge about the effects of not getting the vaccine. The general objective of the study is to assess the perception of community pharmacists in Lipa City, Batangas in taking the role of being one of the vaccinators. This study aims to gather information about the perception of currently employed pharmacists in a community setting in Lipa City, Batangas as one of the vaccinators and provide information regarding the scope of practice allowing pharmacists in administering immunization.

METHODS

Research Design

The descriptive survey method was used to assess community pharmacists' perceptions of taking on the position of vaccine provider in Lipa City, Batangas. Researchers can collect vast amounts of data using a descriptive survey form, which can then be analyzed for frequencies, averages, and trends (McCombes, 2020). In this study, the researchers made use of a quantitative- research

method to gather information about the perception of currently employed pharmacists in a community setting in Lipa City, Batangas as one of the vaccinators and provide information regarding the scope of practice allowing pharmacists in administering immunization.

Participants

The study's participants were community pharmacists currently working in Lipa City, Batangas. The sample population of twenty (20) community pharmacists is the total subjects who are willing to participate in the research. All participants signed an informed consent prior to the conduct of the study. A total of 28 competitive male and female volleyball players from the two schools passed the criteria. All participants, as well as their coaches and trainers were informed about the benefits, demands and potential risks of the study. No monetary incentives were provided.

Data Gathering Instrument

The researchers used self-administered questionnaires as the main instrument in evaluating the pharmacists' knowledge and views about being one of the vaccinators. The questionnaire was adopted from the study entitled "Readiness and Willingness to provide Immunization Services after Pilot Vaccination Training: A survey among Community Pharmacists Trained and Not Trained in Immunization during the COVID- 19 Pandemic in Poland". Likewise, it contains 24-items which are divided into 4 parts such as (1) respondents' demographic profile, (2) essential factors in implementing vaccination services, (3) justification of readiness to provide vaccination service, and (4) barriers affecting the readiness to provide vaccination service. Each questionnaire item was graded on a 4-point Likert scale wherein the values were ranged from 1 to 4 with 1 being the lowest and 4 equivalents to the highest score and ranking system.

The options were interpreted in terms of the following data:

Options	Verbal Interpretation	Scale or Range
4	Strongly Agree	3.50 - 4.00
3	Agree	2.50 - 3.49
2	Disagree	1.50 - 2.49
1	Strongly Disagree	1.00 - 1.49

Questionnaires are used because of considerable advantages such as the uniform collection of answers, so questionnaires are more objective, definitely more than interviews, data collection using a questionnaire is reasonably quick, and information can be obtained from a large portion of a group.

Data Gathering Procedure

With the support of google forms sent to each respondent, the data for this research study was gathered using survey questionnaires. There was voluntary participation, and the respondents were granted complete freedom to answer the questions. Participants were given a certain amount of time to respond. The data were estimated and analyzed using the necessary statistical tools.

Ethical Considerations

The survey and interviews were conducted in a highly confidential manner, and no names were listed in the study. The respondents' identities were kept a secret except for the fact that they were all community pharmacists in Lipa City, Batangas. With the consent of the respondents, this ensures that they voluntarily participated in the study through their honest answers administered by the researchers. The researchers did not provide any opinions; instead, they provided information and conclusions based on the data gathered.

Statistical Analysis

After the data collection process, the researchers analyzed, systematized, and interpreted the data gathered. The information is used to address the study's overall goal, which is to determine community pharmacists' attitudes toward serving as vaccinators in Lipa City, Batangas.

To gather information about the perception of currently employed pharmacists in a community setting in Lipa City, Batangas as one of the vaccinators and provide information regarding the scope of practice allowing pharmacists in administering immunization, the researchers would use mean, frequency, percentage, and ranking.

RESULTS AND DISCUSSION

Table 1
Respondents' Demographic Profile

Profile	F	%
Gender		
Male	3	15.0
Female	17	85.0
Age		
20 – 29 years old	13	65.0
30 – 39 years old	3	15.0
40 – 49 years old	4	20.0
50 years old and above		
Highest Educational Attainment		
Bachelor's degree	20	100.0
Master's degree		
Doctor of Pharmacy (PharmD)		
Years of Practice		
≤ 1 year	4	20.0
2 – 5 years	9	45.0
6 – 9 years	2	10.0
≥ 10 years	5	25.0

Table 1 shows the frequency distribution of the respondents' demographic profile in terms of gender, age, highest educational attainment, and the number of years in practice. Data showed that all the respondents finished their bachelor's degree (100%), and the majority of them were females (85%), ranging from ages 20-29 years old (65%), and have been practicing for 2 – 5 years (45%).

The profession's face is changing as more women enter the pharmacy profession. Over the last two decades, there has been a gender change within the practice of pharmacy. A career that was once dominated by men is now attracting a growing number of women to pursue it. As mentioned by Debbie (2019), although there are more women in the profession than men, male pharmacists are more likely to have their own company. Men and women work in similar environments today, with the exception that men are more likely to be found in independent practice, since they are disproportionately the owners, and women are more likely to be found in community settings (Goldin & Katz, 2016).

Smith (2019) said that the registration requirements for a community pharmacist can differ depending on the country. To become registered, one must have a bachelor's or master's degree in pharmacy, and placement, and a board review. Continuous professional development is needed to maintain registration and ensure that the practice is kept up to date. Furthermore, the study of Khan (2020) found that pharmacists with a bachelor's degree were more likely to work in a community setting than in a hospital setting. Dispensing took up the majority of pharmacists' time, regardless of their degree of expertise. Pharmacists with a BS in pharmacy reported spending a higher percentage of their time on dispensing activities and extemporaneous preparation, and less time on education. They also spent more time conducting public health programs to promote healthy lifestyles, and less time on patient-care facilities and management, whereas pharmacists with a PharmD degree reported spending more time on patient-care services in hospitals, research, and education.

Table 2 shows the essential factors in implementing vaccination services. Overall, the responses got a computed composite mean of 3.69, interpreted as Strongly Agree. Among the listed items, the highest- ranking item is the one stating that there should be cooperation between pharmacists and health centers with a computed mean of 3.90 (Strongly Agree). Then, with a computed mean of 3.85 and a verbal understanding of strongly agreed, continuous training sessions and workshops in vaccinations are required. However, two statements tied with a 3.80 computed mean stating that more university education and training courses for pharmacists administering vaccinations, as well as the possibility of pharmacists specializing in vaccination services, are required. The need for the support of medical and nursing associations got the next ranking with a computed mean of 3.75 (Strongly Agree). This is followed by the necessity to reduce the workload of technical tasks for pharmacists to save time for providing vaccination services with a computed mean of 3.45 (Agree). Lastly, the lowest ranking item is the one stating that the patients expect the implementation of vaccinations administered by pharmacists with a computed mean of 3.30 (Agree).

The three items that got the highest ranking showed that there is indeed a need to have communication between pharmacists and health centers as stated by Poudel et al. (2019), since the only health care professionals allowed to administer vaccines to patients were usually doctors and nurses, addressing significant obstacles to obtain and receive vaccines are crucial. Moreover, there is also the need for university education and training courses for pharmacists in

administering vaccinations as well as the possibility of the pharmacists to have specialization in vaccinating. According to a CDC (Centers for Disease Control and Prevention, 2018) article, all medical professionals who administer vaccines should receive competency-based training on immunization administration rules and regulations before administering vaccines

Table 2
Essential Factors in Implementing Vaccination Services

	Mean	Interpretation	Rank
1. More university education and training courses for pharmacists in administering vaccinations are necessary.	3.80	Strongly Agree	3.5
2. Continuous training sessions and workshops in vaccinations are necessary.	3.85	Strongly Agree	2
3. Cooperation between pharmacists and health centers is necessary.	3.90	Strongly Agree	1
4. The support of medical and nursing associations is necessary	3.75	Strongly Agree	5
5. The possibility for pharmacists to specialize in providing vaccination services is necessary, e.g., obtaining a certificate confirming the ability to administer vaccinations.	3.80	Strongly Agree	3.5
6. Patients expect the implementation of vaccinations administered by pharmacists.	3.30	Agree	7
7. It is necessary to reduce the workload of technical tasks for pharmacists (e.g., entering invoices, verifying supplies) to save time for providing vaccination services.	3.45	Agree	6
Composite Mean	3.69	Strongly Agree	

Table 3
Justification of Readiness to Provide Vaccination Service

	Mean	Interpretation	Rank
1. Pharmacists from community pharmacies have good knowledge of vaccinations and their indications.	3.20	Agree	3
2. Pharmacists from community pharmacies are easily accessible to patients.	3.80	Strongly Agree	1
3. Pharmacists from community pharmacies can play a significant role in advertising and promoting vaccinations.	3.70	Strongly Agree	2
Composite Mean	3.57	Strongly Agree	

Table 3 shows the justification of readiness to provide vaccination service with the computed composite mean of 3.57. Among the listed items, the highest- ranking item is the one stating that pharmacists from community pharmacies are easily accessible to patients with a composite mean of 3.80 (Strongly Agree). Since community pharmacists are always open to advising the patient, they can be easily approached and communicated with. Bach and Goad (2015) endorse this by stating that community pharmacy-based vaccination programs are an easy, cost-effective and affordable option for the public to obtain vaccinations. The next item with a mean of 3.70 (Strongly Agree) that ranked second states that pharmacists from community pharmacies can play a significant role in advertising and promoting vaccinations. According to Bach et al. (2015), community pharmacists empower patients to undergo immunizations, enable other healthcare providers to immunize and specifically vaccinate the patients they serve, serving as immunization advocates in roles such as educators, facilitators, and vaccinators. Finally, the item states that pharmacists from community pharmacies have strong knowledge of vaccines and their indications ranked last among the others, with a mean of 3.20. Since vaccinating was not previously part of the pharmacist's position, respondents only agreed because they understood that pharmacists still needed more experience and expertise before completely devoting themselves to the role of

vaccinator. According to the CDC (Centers for Disease Control and Prevention; 2018), comprehensive and skill-based training should be integrated to be able to expand the ability of the medical team.

Table 4
Barriers Affecting the Readiness to Provide Vaccination Service

	Mean	Interpretation	Rank
1. Pharmacists have too much work and do not have time for vaccinations.	2.60	Agree	6.5
2. Providing vaccinations will add more work to pharmacists.	2.80	Agree	4
3. Patient safety when administering vaccinations is a problem.	2.45	Disagree	8
4. There are not enough training courses for pharmacists.	3.15	Agree	1
5. Patients have less trust in pharmacists who provide these services.	2.60	Agree	6.5
6. Pharmacies are not adjusted to provide these services.	2.95	Agree	2
7. Conflicts with other specialists qualified to administer vaccinations are likely to occur	2.85	Agree	3
8. There are concerns related to handling vaccinations, their storage, and disposing of sharp objects.	2.75	Agree	5
9. Pharmacists do not feel comfortable when using needles.	2.20	Disagree	9
Composite Mean	2.71	Agree	

Table 4 presents the barriers affecting the readiness to provide vaccination service with the computed composite mean of 2.71. Among the listed items, the highest-ranking is the one stating that there are not enough training courses for pharmacists with a computed mean of 3.15 (Agree). This could be because pharmacists have not been considered vaccinators for a decade, and the pharmacy

practice has not been fully expanded until now. According to a recent systematic review from the study of Babar (2021), while pharmacists may help increase vaccine access, evidence of their position in vaccinations is scarce in low and middle-income countries, leading them to lag in terms of pharmacy practice. Similarly, the respondents accepted that pharmacies are not set up to provide these services, that disputes with other specialists trained to administer vaccines are likely to arise, and that offering vaccinations would increase pharmacists' workload with a computed mean of 2.95, 2.85, and 2.80, respectively. Because it is outside of the common practice of pharmacists, conflicts may occur, and adjustment is essential as pharmacists become vaccinators. In fact, according to Gerges et al. (2017), this new function varies from other services offered by pharmacists because it requires physical interaction with patients. Some pharmacists were worried that offering immunizations to their patients would jeopardize their relationship with their physician colleagues because it would discourage patients from seeing their doctors. Additionally, the expanded reach of pharmacy practice was linked to increased quotas and workloads for pharmacists, sometimes without a corresponding increase in available services such as technician hours or pharmacist change overlap, and quotas are seen as an infringement on some pharmacists' professional autonomy. Furthermore, concerns about handling vaccinations, storing them, and disposing of sharp objects also serve as a barrier with a computed mean of 2.75 (Agree). This may be due to a lack of resources in community pharmacies. According to Malande (2019), some local officials and village health group members saw vaccine stock-outs as major gaps affecting vaccination service delivery, and pharmacists might be distressed by the possibility of causing pain throughout vaccination. Moreover, two statements tied with a 2.60 (Agree) computed mean stating that patients have less confidence in pharmacists who offer these services because they are overworked and don't have time for vaccines. Until now, there was an insufficient number of pharmacists working in the community setting, and the only health care professionals allowed to administer vaccines to patients were usually doctors and nurses only, as Poudel et al. (2019) stated in their study.

On the other hand, the two lowest-ranking items have a verbal interpretation of disagreement. The first one stating that patient safety when administering vaccinations is a problem has a computed mean of 2.45 whereas the one stating that pharmacists do not feel comfortable when using needles has a computed mean of 2.20. Patient safety during vaccination would not be a problem and

pharmacists would not feel comfortable when using needles as the study of Milenkovich (2021) stated that some states require pharmacists to participate and complete a training course before vaccinating a patient.

CONCLUSIONS

1. Most of the community pharmacists in Lipa City, Batangas are female, aged 20-29 years old who finished their bachelor's degree and have been practicing in between 2 – 5 years (45%).
2. Based on the perception of the community pharmacists in Lipa City, Batangas, the essential factors to implement vaccination services must mainly focus on the offering of educational training courses, and workshops in order for them to obtain a certificate stating that they are capable of administering vaccines. According to them, it is also important to have cooperation between other healthcare professionals.
3. Community pharmacists in Lipa City, Batangas claim that two key reasons justify their readiness to provide vaccination services: community pharmacies are readily available to patients, and community pharmacies may play a significant role in advertising and encouraging vaccinations.
4. The barrier affecting the readiness of community pharmacists in Lipa City, Batangas to provide vaccination service is the lack of training courses. This may be due to the fact that pharmacists haven't been considered vaccine providers in a decade, and pharmacy practice hasn't been completely extended until now.

RECOMMENDATIONS

1. Educational programs to prepare pharmacists to administer vaccines in community pharmacies, and also guidelines and a legal framework for such services.
2. Cooperation (e. g. having discussions together and collaborating with tasks) between other health professionals is a must.

2. A certificate program that teaches pharmacists the expertise they'll need to become the primary source of vaccine information and administration. The requirement to certify every few years, or submit an annual statement of competency, or both.
3. More universities offering training workshops for the improvement of knowledge and skills of pharmacists as a vaccinator

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