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PUBLIC SCHOOL TEACHER'S KNOWLEDGE AND PERCEPTION ON PHARMACISTS' ROLE AND ITS IMPACT ON THEIR WILLINGNESS TO RECEIVE COVID-19 VACCINE FROM PHARMACISTS

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ABSTRACT
The rapid spread of Coronavirus disease (COVID-19) has brought a global health challenge to humankind. One of the ways to put this pandemic under control is to provide a vaccine to people that will produce immunity. To achieve rapid population-wide coverage of COVID-19 immunization, the Philippine Pharmacists Association (PPhA) had planned to involvepharmacists in the administration of the COVID-19 vaccine to the public. However, public perception of the professional role of pharmacists has been always limited as most people view them as employed only in pharmacies. This study aimed to determine the relationship of knowledge and perception of public school teachers in Jalajala, Rizal towards the roles performed by community pharmacists and the extent of their willingness to receive COVID-19 vaccine from them. This study utilized a correlation descriptive study design and probability sampling. A validated survey questionnaire based on the Likert scale was disseminated to the respondents via Google forms. The findings indicated that public school teachers are much knowledgeable about the roles of community pharmacists with respect to dispensing, compounding, patient counselling, and immunization. This study also shows that the respondents are willing to receive the COVID-19 vaccine from community pharmacists. It is concluded that the prior knowledge and perception of the respondents on community pharmacists' role have a significant relationship to their willingness to be vaccinated by community pharmacists.

KEYWORDS: *Community pharmacists, public school teachers, COVID-19 vaccine, willingness.*

INTRODUCTION
The Coronavirus disease (COVID-19) has created a worldwide pandemic of respiratorydisease (Sauer, 2020). To reduce virus transmission, lockdown restrictions and closure of non-essential activities were implemented. For this reason, online and modular learning became widely used by private schools and colleges. However, this modular learning raised the concern of public school teachers as they are prone to contracting the virus during the distribution and retrieval of learning materials makingthem at high risk in COVID-19 transmissionthat is why they are considered as working class people that need to be prioritized for vaccine protection (Blad, 2020). For the mass vaccination program in the context of COVID-19, it is expected to require many health care providers to achieve rapid population-wide coverage (Elbeddini, 2020). Pharmacists can contribute to this since they are the drug experts and most accessible healthcare provider (Terrie, 2010). However, the public perception of pharmacy services has always been limited (Hindi, 2017). Most people view the position of pharmacists employed only in pharmacies as limited to medication-dispensing operations of prescription or over-the-counter (OTC) products only (Awad, 2017) and only a few are familiar with the role of pharmacists in vaccination. In this regard, the researchers aim to determine the relationship of knowledge and perception of public school teachers on the roles of community pharmacists and their willingness to get vaccinated by a community pharmacist. This study will further raise awareness about the expanding role of community pharmacists inimmunization programs.

METHODS
Study design and settings
The study utilized a descriptive correlational study design. The study was conducted at the municipality of Jalajala, Rizal; also known as "Paraiso ng Rizal". Jalajala is a 4thclass municipality and a rural area in theprovince of Rizal. This town has a total population of 30,121 (2016). It is composed of 11 barangays, 3 are *Poblacion* (municipal center) and 8 are *barrios.* It has 11 public

schools where teachers are allowed to disseminate learning materials and do home visitation for students so this is the mostsuitable place for this research study.

Respondents

The public school teachers of elementary and high schools in the municipality of Jalajala, Rizal were the respondents of the study. The total population of teachers per school that was obtained from 11 public schools were subdivided (strata) based on 75% of the total population to lessen thechance of skipping participants.

Study sampling and inclusion/exclusion criteria

The study utilized a stratified sampling technique under the probability sampling. For the inclusion criteria and with the utilization of this technique, the number of teachers per school were divided to the total number of teachers and were multiplied to get 196 which is the 75% of 261 total number of teachers from 11 public elementary and high schools to get the sample size for the study.

Questionnaire design and validation

A survey questionnaire that was written in the English Language was disseminated to the respondents. The instrument was composed of close-ended questions and structured in a 5-point likert type scale. The survey questionnaire was validated by theexperts and subjected to pilot study on twenty participants. The questionnaire showed acceptable reliability in the alphacoefficient for the variables Dispensing, Compounding, Patient Counseling and Immunization which are .820, .907, .915and .915, suggesting that the items have good and excellent internal consistency. Also, in terms of the extent of willingness, the alpha coefficient is .938, suggesting also that the items have excellent internal consistency.

Data Collection and Statistical analysis

A letter was sent to the 11 school principals to acquire the total number of teachers from each school. The public school teachers were asked to answer the researcher-made-questionnaire via Google forms that was sent to their facebookmessenger and is available to answer within two weeks in their most convenient time. The answers of the respondents were used for the analysis of results and data needed inthe research study.

The collected data was subjected tostatistical treatment. Based on the objectives of the study, weighted mean, pearson's correlation coefficient, and spearman rank correlation coefficient were applied for data analysis.

Ethical Considerations

The protocol of the study gained approval of the CEU IERC with a reference number.

RESULTS AND DISCUSSION

Demographic Profile of the Public SchoolTeachers

The following demographic data that has been gathered from the respondents: age, gender, highest educational attainment and type of subject/s being taught. The majority of the public school teachers are 31-40 yearsold (34.7%), female with the frequency of 170 out of 196 respondents, 144 (73.5%) are Bachelor's degree holders and 100 respondents are teaching non-science related subjects.

Knowledge and Perception of Public School Teachers About the Roles of Community Pharmacists with Respect toDifferent Aspects

It was found out that dispensing obtained the highest weighted mean of 4.35 while immunization obtained the lowest weighted mean of 3.71 both interpreted as Much Knowledgeable/Perceived. The composite mean obtained is 3.97, as shown in the table below.

Aspect	Weighted Mean	Verbal Interpretation	Rank
Dispensing	4.35	Much Knowledgeable/ Perceived	1
Compounding	3.84	Much Knowledgeable/ Perceived	3
Patient Counselling	3.96	Much Knowledgeable/ Perceived	2
Immunization	3.71	Much Knowledgeable/ Perceived	4
Composite Mean	**3.97**	**Much Knowledgeable/ Perceived**	

The result implies that public school teachers are much knowledgeable about the roles of community pharmacists in terms of their abilities in dispensing, patientcounselling, compounding and immunization. They do understand that they make sure that the community will receive the appropriate knowledge in making sure that the medication given to them and the doses are appropriate considering health factors especially in receiving COVID-10 vaccine. This is in relation with credibility theory of Fogg, 2003, as cited in Jessen &Jørgensen (2011) that if public school teachers are knowledgeable about the role of community pharmacists, the teachers can perceived trust from the pharmacists and affect the willingness of public school teachers in getting vaccinated by communitypharmacists.

Computed Weighted Mean on the Extent of Willingness of Public School Teachers in Receiving COVID-19 Vaccine Given by a Community Pharmacist

The table below reflects that the highest weighted mean is 3.98 followed by 3.92, both with interpretation of Agree.

Extent of Willingness I am willing to get vaccinated by community pharmacists because....	Weighted Mean	Verbal Interpretation	Rank
1. they are knowledgeable in giving the right dose of medication hence, providing safe and effective medicines.	3.62	Agree	6
2. they are the ones who prepare custom formulations of medicine to be available in the market.	3.59	Agree	7
3. I trust their competency in the safety and efficacy of COVID-19 vaccine as they are trained to be qualified as "immunizers".	3.67	Agree	5
4. I believe in their vital role in the delivery of healthcare in the community.	3.88	Agree	3
5. I believe that they are ready to serve the purpose of COVID-19 vaccines to the people in their respective communities to end the pandemic.	3.78	Agree	4
6. I believe that they belong to the front liners in the administration of mass vaccination.	3.92	Agree	2
7. I believe that they are trustworthy healthcare providers even though Jalajala, Rizal has low COVID-19 cases.	3.98	Agree	1
Overall Mean	**3.78**	**Agree**	

These weighted means showed that public school teachers are willing to get vaccinated by the community pharmacists because they believe that they are trustworthy health cares, and they are considered as front linersin the administration of mass vaccination.The lowest weighted of 3.59 shows that public school teachers are also willing to getvaccinated by community pharmacists because they are the ones who prepare custom formulation of medicine to be available in the market. The overall mean is 3.78.

This means that the public school teachers are willing to receive COVID-19 vaccine given by a community pharmacist. Findings imply that the respondents find community pharmacists as trusted community health workers and advisors that also promote the safe use of receiving COVID-19 vaccine. The findings are in relations to the statement of Smith (2019) that the profession of pharmacy is focused on safe and effective medication use. Their role has evolved into advocating public health and patient-centered care services and they are acknowledged in the adult immunization program.

Result of the R-test on the Significant Relationship Between the Knowledge and Perception of Public School Teachers About the Roles of Community Pharmacists and Their DemographicProfile

The hypothesis is accepted in terms of the perception of public school teachers about the roles of community pharmacists with respect to dispensing, compounding, patient counselling and immunization in terms of their age, gender, highest educational attainment and type of subject/s being taught, since the obtained p-values are higher at 0.05 level of significance.This means that there is no significant relationship between the knowledge and perception of public school teachers aboutthe roles of community pharmacists and their demographic profile.

Result of the R-test on the Significant Relationship of Knowledge and Perception of Public School Teachers Towards the Role of Community Pharmacists and the Extent of their Willingness to Get Vaccinated by Community Pharmacists

The data from the table below demonstrates that the hypothesis is rejected in terms of the knowledge and perception of public school teachers towards the role of community pharmacists and the extent of their willingness to get vaccinated by community pharmacists, since the obtained p-values are lower than the 0.05 level of significance.

	Knowledge and Perception	r-value	p-value	Decision	Verbal Interpretation
Extent of Willingness	Dispensing	.545	.000	Rejected	Significant
	Compounding	.619	.000	Rejected	Significant
	Patient Counselling	.659	.000	Rejected	Significant
	Immunization	.652	.000	Rejected	Significant

This means that there is a significant relationship between the knowledge and perception of public school teachers towardsthe role of community pharmacists and their willingness to receive COVID-19 vaccine from them. From this result, it can be implied that the roles of community pharmacists have something to do within the personal preferences of the public school teachers to get vaccinated by them, especially the COVID-19 vaccine. This further implies that the roles of community pharmacists are a variable towards the extent of willingness of the public school teacher tobe vaccinated by them. Since the public school teachers know that the communitypharmacists in Jalajala, Rizal are doing their best to impart their knowledge and skills andsee to it that they are treating them with utmost care, they are in comfort to receive it from them. Furthermore, with the findings of Zajonc (2001), the mere exposure theory states that a continuous exposure to something affects people's preference because it reduces uncertainty. It supports the idea that once the role of pharmacist as immunizers becomes a well-known practice, this enhances the public school teachers` judgment and might be willing to be vaccinated by community pharmacists.

CONCLUSION

The study indicated that the public school teacher had overall positive perceptions of community pharmacists. Their knowledge and perception towards the role of community pharmacists have a significantrelationship in the extent of their willingnessto receive the COVID-19 vaccine administered by community pharmacists.

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