Comparison of Pharmacy Students' Perception of Learning Experiences in Interprofessional Education in the Philippines and Indonesia

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Philippine Journal of Health Research and Development PJHRD

Comparison of Pharmacy Students' Perception of Learning Experiences in Interprofessional Education in the Philippines and Indonesia

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RESEARCH ARTICLE

Abstract

Background: The inclusion of Interprofessional Education (IPE) in pharmacy schools has long been recommended by American Association of Colleges of Pharmacy and its constituents to provide faculty and students the opportunity for collaborative practice. However, IPE has not been fully embraced in all pharmacy schools. The University of the Philippines Manila (UPM) College of Pharmacy and Universitas Ahmad Dahlan (UAD) Faculty of Pharmacy in Yogyakarta, Indonesia were among the first in Asia to incorporate IPE in their respective countries.
Objective: The objective of the study is to compare the perception of the learning experiences of pharmacy students of UPM and UAD. Findings from this study may provide an indication whether IPE is an effective teaching strategy to make pharmacy students "collaborative practice-ready" graduates regardless of the health professions they worked with, scope of IPE experience, and the location of IPE.
Methodology: The study is a quantitative, comparative pre- and post-intervention which utilized the validated questionnaire by Luecht (1990). This was administered to fifteen (15) UPM and eighteen (18) UAD first batch of pharmacy students who participated in IPE in 2014 and 2015, respectively.
Results and Conclusion: The results showed high scores for both universities but UPM students have consistently improved scores in terms of autonomy, competency, perceived need for cooperation, and understanding the roles of others. The differences in the results may have been contributed by the small sample size, results being self-reports, established IPE program in UPM, diversity of the team, and previous experience of faculty preceptors handling multidisciplinary teams. Despite the differences, the study still showed that IPE can be a valuable tool in producing "collaborative practice-ready" pharmacy graduates who can promote better patient and community outcomes.

Keywords: *interprofessional education, pharmacy IPE, collaborative practice*

Introduction

Interprofessional education (IPE) is recognized worldwide as an innovative strategy to promote collaborative practice among healthcare professionals. IPE occurs when students from two or more professions learn about, from, and with each other to enable effective collaboration and improve health outcomes [1]. On the other hand, collaborative practice happens when multiple health workers from different professional backgrounds work together with patients, families, carers and communities to deliver the highest quality of care and achieve local health goals [1]. Patients receive safer, high quality care when health care professionals work effectively in a team, communicate productively, and understand each other's roles [2]. IPE teams enhance quality of patient care, lower costs, decrease patients' length of stay, and reduce medical errors [2].

The goal of IPE is to develop knowledge, skills, and attitude that result in interprofessional team behaviors and competence so students will learn how to function in a team and carry this into their future practice and become "collaborative practice-ready" graduates [1,3]. Healthcare professionals that are able to undergo IPE should engender interprofessional capability, enhance practice within each profession, apply critical analysis to collaborative practice, and respond more fully to the needs of patients, families, and communities [4].

While many healthcare professions such as medicine, nursing, community and social work, dentistry, allied medical professions, and public health are reported to have been more involved in IPE, this is not the case in most pharmacy schools. Long has it been recommended that schools and colleges of pharmacy provide faculty and students meaningful opportunities to engage in IPE to better meet health needs of society [3, 5].

The College of Pharmacy of the University of the Philippines Manila (UPM) is one of the first Philippine pharmacy schools to incorporate IPE as part of pharmacy course work. The platform for the IPE activities is the University's Community Health and Development Program (CHDP), an academe-local government partnership that targets to address health needs of participating communities. The activities that the students and faculty engage in within the program depend on the goals and targets agreed upon with the partner communities in the province of Cavite (including Amadeo, Mendez, Indang Baylen, and Alfonso). Pharmacy students who are deployed during their community pharmacy internship and public health course join students from other disciplines, such as medicine, nursing, public health, allied medical professions, social work, and dentistry, depending on the time of deployment.

On the other hand, the Faculty of Pharmacy of Universitas Ahmad Dahlan (UAD) in Yogyakarta is also among the first Indonesian pharmacy schools to incorporate IPE in their pharmacy course work, specifically the Pharmacy Health Community course. However, the pharmacy students worked with public health students only while taking their subject in Pharmacy Health Community during their engagement with their partner community. The IPE partner community of UAD is the Titang subvillage, Sumberagung village, Bantul county, Yogyakarta, Indonesia due to the existing MoU between UAD and the Health department of Yogyakarta. IPE in pharmacy education is aligned with the paradigm shift in the profession from being product-centered to patient-centered. As IPE in both institutions is in its infancy, the objective of the study is to compare the perception of learning experiences of pharmacy students of UPM and UAD. This perception could serve as an indicator if IPE is an effective teaching strategy among pharmacy students to make them "collaborative practice-ready" graduates regardless of the health professions they worked with, the scope of their IPE experience, and the environment where they had IPE, along with all of its geo-political and socio-economic conditions. There were numerous studies of IPE in other health professions in the country but there is a scarcity of IPE studies for pharmacy students especially in our region.

Therefore, the comparison of the IPE experience of pharmacy students of UPM and UAD is relevant since it is the first time for both institutions to include IPE in their courses. They were also the first pharmacy schools in their respective countries and in Asia to incorporate IPE. Their difference in team composition, IPE scope, and location of IPE in both populations can be used as a model for other pharmacy schools in their respective countries to include IPE if it is an effective teaching strategy among pharmacy students to promote collaborative-practice pharmacy graduates. This study is timely now with the shift in the practice of pharmacy profession from being product-centered to a patient-centered practice in Western and Asian countries and with the ASEAN harmonization where professionals from other member countries can practice in other ASEAN member countries including the Philippines and Indonesia.

Methodology

Study Design and Participants

This is a quantitative, comparative pre- and post-intervention study which utilized a validated survey questionnaire as the main data collection tool. Purposive sampling from the whole batch of pharmacy students for each University was employed in this study. The tool was administered to the first batch of selected pharmacy students of UPM and UAD who participated in IPE in 2014 and 2015, respectively. The difference in the year of administration was due to UPM College of Pharmacy's inclusion of IPE in its Public health course ahead of UAD, then the UPM College of Pharmacy assisted UAD in the establishment of its first IPE program in 2015 patterned after the IPE program UPM through their MOU with UP Manila. There was a total of fifteen (15) pharmacy students from UPM who worked in interprofessional teams consisting of students of medicine, social work and nursing. From UAD, a total of

eighteen (18) pharmacy students who worked with students of public health completed the questionnaire. The student respondents were the first set of pharmacy students from both universities that went through IPE in their course work and the first batch in their respective countries. The limited number of students involved in the study for UPM and UAD was due to the limited slots for pharmacy students in IPE teams in their partner communities.

There was a difference in the composition of the IPE team of UP Manila from the IPE team of UAD due to the month of deployment of students. Pharmacy students who were taking their Public Health subject were able to work with students under the CHDP Program who were also deployed at the same time in their partner community in Cavite such as students from college of medicine, social work, and nursing. They were deployed for a total of six (6) weeks in Cavite divided into 2 batches of students with nine (9) students for the first batch and six (6) students for the second batch. The activities of students in the IPE included lectures from the Public Health class, case-based discussions of patient's conditions with other students from different colleges, and possible interventions as a group. The pre-test was obtained prior to the deployment and the post-test was obtained after the end of deployment per batch. On the other hand, Universitas Ahmad Dahlan pharmacy students who were taking their subject in Pharmacy Health Community worked with public health students only who were also taking their subject in Clerkship 2. The IPE duration is for fourteen (14) weeks divided into two (2) with the first seven (7) weeks allotted for lectures in the class and the last seven (7) weeks for the deployment. The lectures included roles of students of pharmacy and public health in the IPE, Blooms concept, National Health rules, and community diagnostics. The deployment for seven (7) weeks in Titang subvillage, a suburban area of Sumberagung village, Bantul county, Yogyakarta, Indonesia included interviews and discussions with families, analysis of health community needs, and community interventions.

The immersion component was added to their course activity of pharmacy students in their public health subject as part of the teaching strategy to promote collaborative practice-ready pharmacy graduates due to the new focus of practice of the profession which is not only manufacturing drugs but also taking care of patients by reviewing their medication regimen and health care needs. On the other hand, the UAD Pharmacy students' community immersion was part of their Pharmacy Health community subject almost equivalent to the public health subject of UP pharmacy students. The UAD's IPE program was patterned after the UPM's IPE activity to provide opportunity for the pharmacy students to interact with other health sciences students in managing the health needs of a community. Both schools of pharmacy had these courses before but without the component of collaboration with other colleges. However, due to the paradigm-shift in the profession of pharmacy from being product-focused to patient-centered practice, the interaction with patients and students from other colleges started in both schools. This is to provide an opportunity for students to collaborate with students from other colleges who will become members of the healthcare team and eventually will be working with them to improve the condition of patients.

Materials or Instruments

A modified Interdisciplinary Education Perception Scale questionnaire by Luecht and his colleagues [1990] validated by Curtin University in Australia and a set of open-ended questions developed by the researchers were used in this study [9]. The five (5) open-ended questions in the pre-test assessed the knowledge and concerns of students prior to IPE and a different set of six (6) open-ended questions in the post-test assessed the student's evaluation of their IPE experience.

The modified Interdisciplinary Education Perception Scale was employed to assess the effect of interprofessional approach among the pharmacy students. The perception scale comprised of questions to assess the effects of IPE on areas of autonomy and competency (questions 1 to 6, and 16), perceived and actual need for cooperation (questions 7 to 13, and 17 to 19), and understanding the roles of others (questions 14-15 and 20-21). The scores used in the perception scale range from 1 to 6 with the following indications: 1-strongly disagree, 2-moderately disagree, 3-somewhat disagree, 4-somewhat agree, 5-moderately agree, and 6-strongly agree (Table 1).

Data Collection and Analysis

Both groups of pharmacy students were asked to complete the questionnaire before they were deployed to work with students from other disciplines, and after the completion of their IPE. There was a content analysis on the open-ended questions while the responses from the perception scale were all encoded in Microsoft Excel 2010 and analyzed with STATA using Wilcoxon Signed Ranks Test to check if the students' perceptions have improved or not after the IPE experience. Means of the scores for each item

in the scale among pharmacy students in the Philippines and Indonesia were then analyzed. The P-value that was set for this study was 0.05, the most widely adopted arbitrary value for P; hence P>0.05 was considered not statistically significant.

Results

The knowledge and concerns about interprofessional care in the community were addressed in the open-ended questions part of the survey. The pre-test results showed that most of the pharmacy students, when asked about their knowledge on interprofessional care in the community, perceived it as an interdisciplinary program which aims to nurture and enhance the collaboration among future healthcare professionals. This is to maximize healthcare by providing a holistic approach and achieving optimal health outcomes in the treatment of diseases in the community. One, however, mentioned that experiencing interprofessional patient care in the community is a first time, and did not have any perception about the aforesaid collaboration.

When asked about what they would gain from interprofessional patient care, most of them answered developing interpersonal skills not only with other healthcare professionals, but also with actual patients. They believed that, through this experience, they can understand the most common health-related issues in communities, and plan healthcare strategies with other professionals to address shortcomings of primary healthcare implementation. They also felt that this experience would help them gain insights on how pharmacy expertise can be applied in the context of community health promotion, as well as see different perspectives of various professionals in managing a patient case.

The students were asked about their concerns for themselves, some said that they are "not ready". Some were worried about how they can contribute to the Interprofessional team since they felt that their knowledge and communication skills are inadequate, and hence their expertise, as of that moment, may not be of great help to the team. They also perceived that the value of a "pharmacist's opinion in interprofessional care is undermined and hence underutilized".

Nevertheless, one of them felt that this approach could define each of the professional's roles and responsibilities. Consequently, it would serve as an opportunity for them to identify where they can apply their expertise.

The students were also asked what their concerns were about patients and people in the community. Some felt that there may be uncooperativeness, or even resistance, to the approach since this program may not be appreciated by community members, which could result to less support and participation.

Pre- and Post-IPE in the Philippines

Generally, most of the respondents somewhat or moderately agreed to majority of the items in the pre-test, except with Item 5 (3.7), Item 12 (3.4), and Item 22 (3.9). These items pertain to how Filipino pharmacy students perceived how other health professionals regard the pharmacy profession. Thus, having relatively low mean scores may signify that the respondents think that other health professionals undervalue their profession, and have not yet acknowledged their critical role in an interprofessional team or in any healthcare setting. These low mean scores validated the concern of one student that the pharmacist's value in interprofessional care is undermined and underutilized. The lowest mean score (2.9) in the pre-test was on Item 14. The respondents' perception on having lower status than individuals from other professions suggests feeling of inferiority, which supported respondents' initial concerns related to not having the adequate competency and right interpersonal skills.

In the post-test, the mean scores of all items after the IPE were observed to be higher except for Item 14 (2.4). This may be interpreted as deeper appreciation of equality of health professions with respect to the value of their contribution to health care. For item 14, the score became lower from 2.9 to 2.4 which means that prior to IPE, UPM pharmacy students felt that they have a higher status than individuals in other professions. However, their view may have been affected by IPE such that after their IPE experience they felt that all professions were as equally important as theirs in managing a patient's health needs. Statistically significant positive differences were noted for some of the items. There is significant improvement on how pharmacy students perceived how individuals in other professions appreciate pharmacists in terms of general impression of the practice (Item 12, 4.7; p= 0.0014) and respect for their work (Item 5, 5.0; p = 0.005). On the part of the pharmacy students, statistically significant improvement was observed in terms of how they regard other professionals (Item 20, 5.5; p=0.0089) and trust their professional judgement (Item 13, 5.2; p=0.0475).

Table 1. *Mean Results of Pharmacy Students Before and After IPE*

Item No.		Philippines			Indonesia			Comparison of Post-test Mean Scores
	Individuals in my profession:	**Pre-IPE**	**Post-IPE**	**p-value[1]**	**Pre-IPE**	**Post-IPE**	**p-value[2]**	**p-value[3]**
1	Are well trained	4.9	5.0	0.5637	4.0	4.4	0.7084	0.0133*
2	Are able to work closely with individuals in other professions	4.5	4.9	0.3086	4.3	4.9	0.0622	0.7647
4	Demonstrate a great deal of autonomy	4.9	4.9	1.0000	3.0	4.2	0.0020*	0.0126*
6	Are very positive about their goals and objectives	5.1	5.4	0.2116	4.8	4.2	0.9108	0.0161*
7	Need to cooperate with other professions	5.2	5.6	0.5741	5.7	5.2	0.0181*	0.0408*
9	Are very positive about their contributions and accomplishments	4.5	5.1	0.1605	5.1	5.1	0.8381	0.7815
10	Must depend upon the work of people in other professions	4.4	4.5	0.9762	3.7	4.6	0.0277*	0.3956
13	Trust each other's professional judgment	4.7	5.2	0.0475*	2.8	3.1	0.5908	0.0000*
14	Have a higher status than individuals in other professions	2.9	2.4	0.1158	2.2	3.0	0.0015*	0.1955
15	Make every effort to understand the capabilities and contributions of other professions	4.7	5.1	0.3315	4.3	4.5	0.1962	0.1671
16	Are extremely competent	4.7	4.8	0.7429	4.1	4.5	0.1237	0.4439
17	Are willing to share information and resources with other professionals	5.3	5.5	0.6403	4.8	5.2	0.3941	0.1202
19	Have good relations with people in other professions	4.4	4.9	0.0624	5.5	4.9	0.0297*	0.6600
20	Think highly of other related professions	4.7	5.5	0.0089*	3.8	4.5	0.0572	0.0051*
21	Work well with each other	4.8	5.5	0.0088*	5.4	4.9	0.1174	0.0613
	Individuals in other professions:							
3	Are able to work closely with individuals in my profession	4.1	5.0	0.0751	4.1	4.2	0.5482	0.0878
5	Respect the work done by my profession	3.7	5.0	0.0050*	4.4	4.8	0.0714	0.2314
8	Need to cooperate with people in my profession	5.3	5.3	0.6927	5.4	5.2	0.1222	0.3547
11	Must depend upon the work of people in my profession	4.3	4.3	0.8613	3.3	4.4	0.0103*	0.5552
12	Think highly of my profession	3.4	4.7	0.0014*	3.1	4.1	0.0634	0.0373*
18	Are willing to share information and resources with people in my profession	4.7	5.4	0.0863	5.1	4.7	0.2164	0.0125*
22	Often seek the advice of people in my profession	3.9	4.5	0.1929	4.2	4.6	0.5329	0.7150

Adopted fro[11]uecht et. al., 1990. J Allied Health 19 (2), 181-191
1 Wilcoxon [11]ed Ranks Test for pre- and post-IPE mean scores of Filipino pharmacy students
2 Wilcoxon Signed Ranks Test for pre- and post-IPE mean scores of Indonesian pharmacy students
3 Wilcoxon Signed Ranks Test for post-IPE mean scores of Filipino and Indonesian pharmacy students
* Statistical significance at p-value < 0.05

Pre- and Post-IPE in Indonesia

Prior to IPE, most of the Indonesian pharmacy students somewhat to moderately agreed to all items except with Item 4 (3.0), Item 13 (2.8) and Item 14 (2.2). Pharmacy students think that pharmacists do not have great deal of autonomy in practice, and that they do not have higher status than individuals from other professions. As there is also low trust for each other's professional judgement, the pharmacy students perceived low trust in pharmacists among other health professionals (Item 12, 3.1) and that these health professionals do not necessarily have to depend on the work of pharmacists (Item 11, 3.3). Similar to the case of the Filipino pharmacy students, having low mean scores suggest that the respondents think that other health professionals undervalue their profession, and have not yet acknowledged their critical role of the pharmacist in health service delivery.

After IPE, the mean scores generally improved except for Item 6, Item 7, Item 8, Item 18, Item 19 and Item 21. While such is the case, it must be noted that the mean scores still signified agreement to these items. There is statistically significant improvement on how pharmacy students perceived how individuals in their profession have great deal of autonomy (Item 4, 4.2; p=0.0020), and higher status than other professionals (Item 14, 3.0; p=0.0015). Furthermore, there is statistically significant decline on how pharmacy students perceived the need to cooperate (Item 7, 5.2; p=0.0181) and have good relations with other professionals (Item 19, 4.9; p=0.0297). However, there is statistically significant improvement in the way pharmacy students perceived the need for health professionals to depend on each other's work (Item 10, p=0.0277; Item 11, p=0.0103).

Post-IPE between Indonesia and Philippines

Only a few items had statistically significant difference in the post-IPE mean scores between Filipino and Indonesian pharmacy students, where all the mean scores were high in both, it has been consistently higher among the Filipino pharmacy students. They have registered higher confidence that individuals from their profession are well-trained (Item 1, p=0.0133), have great deal of autonomy in practice (Item 4, p=0.0126), and are positive about their goals and objectives (Item 6, p=0.0161), as individuals from other professions think highly of the pharmacy profession (Item 12, p=0.0373) and are more willing to share information and resources to them (Item 18, p=0.0125). After the IPE experience, the Filipino pharmacy students also expressed more pronounced perception that there is a need to cooperate with other professions (Item 7, p=0.0408) as they think highly of other related professions (Item 20, p=0.0051). Indonesian pharmacy students were not in agreement that individuals in their profession trust each other's professional judgement (Item 13, p=0.0000).

Discussion

Results indicated that IPE course generally improved the Filipino and Indonesian pharmacy students' perception of their profession and how other professions value them and their critical role in the healthcare team (Items 1-5, 9-17, 20, and 22). Students from both universities agreed that they were competent and were able to work closely with individuals from other professions. They have also realized that other professions respect the work done by their profession and often seek advice from them as compared to their preconceived notion that the other professions do not think highly of them and do not respect their work. They were able to comprehend that they should make every effort to understand the capabilities and contributions of other professions and the importance of their contribution to the team while maintaining a great deal of autonomy. These findings support how IPE breaks down professional silos while enhancing collaborative and non-hierarchical relationships in effective teams [4].

However, it was noted in the post-test that while IPE has improved the learning experience of students from both universities, Indonesian pharmacy students significantly differed from Filipino pharmacy students with Filipino students showing greater confidence in their perception of being well-trained, demonstrating a great deal of autonomy, about being very positive about their goals and objectives, their need to cooperate with other professions, how they think highly of other related professions, how they perceive other professions think highly of them, and the other professions' willingness to share information and resources with them (Items 1, 4, 6, 7, 12, 18, and 20). It was also noted that Indonesian pharmacy students do not trust each other's professional judgement while students in the Philippines consistently gave higher positive results in all these items.

The differences between students from Indonesia and Philippines may have been contributed by several factors. Students from UPM were part of a more established, long-standing program like CHDP where community members and faculty have higher consciousness of the importance of working together. Students from UPM have already been deployed to the community through the CHDP in their community internship program thus they have a prior exposure to the set-up in the community where they need to work with local and barangay officials and health workers. Programmatic issues and adjustments for both

faculty and students brought about by trying the IPE set-up for the first time may have somewhat hindered creating a more conducive environment for IPE. As an example, faculty preceptors in UPM had previous experience handling multi-disciplinary teams such as public health, medicine, allied medical professions, and nursing. Building the capacity of interprofessional preceptors and developing learning resources are proven to be critical in IPE [6].

Additionally, the Filipino pharmacy students were able to join more diverse IPE teams comprised of students with diverse backgrounds (e.g. nursing, social work and medicine) as compared to Indonesian students working only with public health students. According to one study, most Filipino OTs, PTs, and SLP students from allied medical professions have had prior IPE experience which led to a generally agreeable attitude towards IPC [10]. This interaction with a more diverse group and their prior IPE experience may have contributed to a more cooperative learning environment among Filipino students rather than just two professions working together which could create a more competitive atmosphere. Composition of the group influences outcome according to social identity theory and social categorization wherein perceived similarities and dissimilarities between ourselves and others provide the basis for categorization into "in-group" and "out-group" wherein relations with members from the outgroup are characterized by distance, information withholding, and conflict. [7] This is more evident in a team composed of only two different professionals like the IPE in Indonesia wherein they can classify the other members as the "out-group". There is also evidence that professionals tend to operate in uniprofessional silos and that attempts to share knowledge across professional borders are often unsuccessful [7]. Another study on attitudes of students in IPC showed that the most common factors influencing the attitudes of students in an IPC include: feeling of belongingness, insecurities about abilities, admiration for others, not enough time for activities/futile activities, better patient health due to IPE, and difficulty of community work/paperwork [11]. Another study also showed that students with little or no curricular-based structured experiential training yet largely drew upon personal experiences, whereas senior students, who did have some amount of professional context, often mirrored those that have been found in other studies investigating this interdisciplinary partnership in the clinical setting [12]. These most common factors influencing the attitudes of IPC students and their drawing out upon personal experiences due to little or non-curricular based structured experiential training may have been present among students that could have contributed to their perception of other health professionals during the IPC.

The limitations of the study such as small sample size and it being self-reports may have also contributed to the differences in the results. In the context of the IPE in UAD, given that the IPE activity was done outside an ongoing formal engagement with the community, students from both professions may have felt the need and pressure to rise up to the challenge resulting to more independent way of doing things. In the process, they might have become more protective of their own profession, as evidenced by some of them becoming less willing to share information and collaborate with other professions. An important principle in IPE is the provision of equal opportunities within and between the professions and all with whom they learn and work which is critical in sustaining identity and expertise of each profession [8]. If this is addressed, the IPE can focus back on the needs of individuals, families, and communities to improve their quality of care, health outcomes and well-being.

Conclusion

Pharmacy students are valuable in the healthcare team. For the students to realize their value and the contributions that they can make, they need to interact with other health professionals as early as their undergraduate years. The contribution and roles of pharmacists must also be fully understood by other professionals not during their actual practice in the hospital or community but during their university training. This is to facilitate the collaborative practice that we expect among our health care professionals. For UPM Pharmacy students, mean scores of all items after the IPE were observed to be higher which may be interpreted as students after their exposure to IPE developed deeper appreciation of equality of health professions with respect to the value of their contribution to health care. Items 5, 12, 13 and 20 showed positive significant improvement on how pharmacy students perceived other health professionals' respect for their work and appreciation of the pharmacy profession as well as how they regard other professionals' judgement and contribution. For UAD Pharmacy students, the mean scores after the IPE generally has improved except for some items but still their mean scores signified agreement to these items. Items 10, and 11 also showed statistically significant improvement in the way UAD pharmacy students perceived the need of health professionals to depend on each other's work. Thus, IPE is a valuable strategy to promote collaborative practice among health care professionals while they are still in the university. Understanding the roles of each profession promotes respect and cooperation among different

professionals. Moreover, it promotes utilization of expertise from the different health professionals to achieve better patient outcomes.

The study showed that IPE in both universities can be a valuable tool in producing "collaborative practice-ready" graduates regardless of where it is practiced, the scope of the practice be it a case-based or community-based intervention, and the composition of the team. Although IPE in both universities can be improved to address diversity of the team and improve collaboration, still its value as an educational strategy is indispensable. The learning experience of pharmacy students from both universities after their IPE showed that IPE does not only promote collaboration among different professionals, but most importantly it promotes improved learning experience, understanding, valuing, and respecting of the roles of their profession and those of the other professions. The established value of each profession in the IPE team is a fundamental factor for future interprofessional collaborations of these practitioners that would eventually benefit not only their professions, but most importantly, their patients and their communities.

Acknowledgment

Special thanks to the faculty and staff of the UP Manila Community Health and Development Program, and to Mr. Mac Ardy J. Gloria.

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