

Readiness of Health Science Students Towards Interprofessional Learning

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Abstract

Patient-centered care is a complex activity that requires a collaborative approach within the healthcare team. This study assessed the level of readiness in interprofessional learning among health science students and determined which demographic profile predicted the level of readiness in interprofessional learning. Descriptive comparative research was used as the design of the study and utilized purposive sampling. The Readiness for Interprofessional Learning Scale (RIPLS) was used to gather the data in order to determine the level of readiness in IPE among health science students. A total of 412 students completed the survey which consists of nursing (n=119), medical technology (n=138) and pharmacy (n=155). Overall, the study revealed a high degree of readiness and positive attitude regarding the value of teamwork and interprofessional learning. Specifically, pharmacy students have more positive attitudes towards IPE as compared to other health disciplines.

Keywords: *Health science students, interprofessional learning, RIPLS,*

Introduction

It is widely known that patient-centered care fosters engagement to patients in providing collaborative approach. However, numerous health systems are fragmented to manage unmet needs predominantly due to lack of human resources. There is an implied expectancy that healthcare professionals will function efficiently once in a healthcare setting. Thus, it is presumed that interprofessional learning environment is a vital part of every healthcare discipline to have their own unique specialized set of technical skills. While the impact of interprofessional education (IPE) serves as a basis and influence students to increase readiness, having health sciences students learn together may promote improved collaboration leading to enhanced quality of care and health outcomes. Thus, highlighting the importance of IPE.

IPE is defined as the means by which healthcare professionals work together and learn from each other to further improve the healthcare discipline collaborations and the quality of care for individuals, households, and communities¹. To understand the core principles of healthcare discipline and be familiar to such, health science students must incorporate essential knowledge in terms of their own profession to establish collaborative competencies in a healthcare setting. It enhances the potential of health science students to interact with their future healthcare colleagues in a collaborative manner to improve quality of care to patients. In addition, IPE occurs when students from two or more professional backgrounds work together with patients, families, and care givers to render the highest quality of care². The benefits of collaboration allow healthcare professionals to work effectively as a team, and serve as direct goal of IPE that starts with the readiness of health science students³. In view of that, it is also a factor that refines patient safety and quality of patient-centered care. It yields better health outcomes and improved healthcare collaborations to satisfy and meet the healthcare needs of patient.

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Patient care is a complicated activity yet it is the most essential part of the healthcare discipline. Effective and quality patient care needs health and social care professions to work together effectively in order to contribute to an improved healthcare discipline. As the need for healthcare delivery becomes more complex, a thorough collaboration and teamwork from the different healthcare disciplines are needed. However, evidence suggests that certain health professions do not work well together⁴. The healthcare team is comprised of individuals who have different professional backgrounds hence their proficiency is limited to only one healthcare discipline. Thus, the diverging of professions could evidently inhibit effective collaboration between healthcare professionals⁴. IPE serves as a way in enhancing health science students' teamwork and collaboration that will result in an improved quality of patient care.

Purpose

The aim of the study was to:

1. Determine the demographic profile of the participants such as age, gender, and healthcare discipline
2. Assess the level of readiness in interprofessional learning among health science students in selected universities in Manila.

Method

Research design and sampling technique

A descriptive comparative research was used as the design of the study and utilized purposive sampling in selecting participants in the study.

Setting of the study

The researchers conducted the study in selected universities in Manila where there are varied health science courses specifically, medical technology, nursing and pharmacy.

Instrumentation

The researchers adapted and used the Readiness for Interprofessional Learning Scale (RIPLS) Questionnaire to gather the data needed. This examined the readiness of healthcare disciplines towards interprofessional learning. The first page of the survey questionnaire includes the demographic profile connoting the age,

gender and healthcare discipline and the next part is the RIPLS Questionnaire.

RIPLS Questionnaire

RIPLS Questionnaire is a 19-item tool that is divided into four subscales. This includes Teamwork and Collaboration that examines healthcare discipline's attitude towards IPE (Items 1-9). Positive Professional Identity which analyzes one healthcare discipline's role comparing to the other role of healthcare discipline members (Items 10-12). The third subscale is the negative professional identity which will also analyze one healthcare's discipline (Items 13-16). Lastly, Roles and Responsibilities subscale evaluates the attitude of a healthcare discipline towards patient-centered care (Items 17-19).

RIPLS Questionnaire is answerable and graded on a 5-point scale wherein it is specified as strongly disagree, agree, undecided, disagree and strongly disagree for each statement. According to McFadyen et al.⁵ Cronbach's alpha.

Data Collection Procedures

Prior to the data collection, an ethical clearance was secured Arrellano university, Ethics review board Arrellano university, Ethics review board. Afterwards, a letter of permission was sent to the Deans of the respective departments in the selected universities. It was administered to the selected respondents of the study. The data gathered from the respondents was encoded in Microsoft Excel and was analyzed using IBM SPSS Statistics for Windows, Version 23.0. Armonk, NY: IBM Corp.

Findings

Demographic Profiles of the Respondents

A total of 412 individuals were surveyed from different disciplines in the health science courses which includes 138 nursing students (33.5%), 119 medical technology students (28.9%) and 155 pharmacy students (37.6%). On the other hand, there were a total of 79 male respondents (19.2%) and 333 female respondents (80.8%) surveyed

Level of Readiness in IPE among health science students

Table 1 shows the overall RIPLS score and subscale scores of the respondents based on health disciplines which is measured based on four subscales namely: Teamwork and Collaboration, Positive Professional Identity, Negative Professional Identity and Roles and Responsibilities.

Table 1. Level of Readiness in IPE among health science students

RIPLS subscales	All students (n=412)	Nursing (n=119)	Medtech (n=138)	Pharmacy (n=155)
	Mean $\pm$ SD	Mean $\pm$ SD	Mean $\pm$ SD	Mean $\pm$ SD
Overall RIPLS	57.93 $\pm$ 5.62	57.64 $\pm$ 4.87	55.51 $\pm$ 3.67	60.32 $\pm$ 6.56
Teamwork and Collaboration	41.29 $\pm$ 4.16	41.27 $\pm$ 3.51	41.43 $\pm$ 4.15	41.17 $\pm$ 4.63
Positive Professional Identity	8.20 $\pm$ 3.48	8.36 $\pm$ 3.39	6.52 $\pm$ 2.58	9.57 $\pm$ 3.64
Negative Professional Identity	17.88 $\pm$ 2.28	17.96 $\pm$ 2.04	17.85 $\pm$ 2.40	17.86 $\pm$ 2.37
Roles and Responsibilities	11.30 $\pm$ 3.30	10.74 $\pm$ 2.11	10.42 $\pm$ 1.85	12.50 $\pm$ 4.51

Comparison of the RIPLS score among health disciplines

A one-way ANOVA was utilized to compare the RIPLS score among health disciplines. Significant differences were noted in the overall RIPLS score ($F=30.861$, $p=0.000$), positive professional identity ($F=0.151$, $p=0.000$), and roles and responsibilities ($F=18.31$, $p=0.000$) while no significant differences were noted in the teamwork and collaboration ($F=0.151$, $p=0.860$) and negative professional identity ($F=0.089$, $p=0.915$).

Table 2. Comparison of RIPLS score among health science disciplines

RIPLS subscales	ANOVA	
	F	p
Overall RIPLS	30.861	0.000*
Teamwork and Collaboration	0.151	0.860
Positive Professional Identity	32.36	0.000*
Negative Professional Identity	0.089	0.915
Roles and Responsibilities	18.31	0.000*

*The level of significance is set at <0.05

Subsequently, post-hoc tests were done to determine the specific subscales in RIPLS where significant differences were found as shown in Table 3.

Table 3. Mean differences in subscales and total RIPLS between student disciplines

Discipline	Overall RIPLS		Positive Professional Identity		Roles & Responsibilities	
	Mean	p	Mean	p	Mean	p
Pharmacy vs. Nursing	60.32 vs. 57.64	0.000*	9.57 vs. 8.36	0.007*	12.50 vs. 10.74	0.000*
Pharmacy vs. Medical Technology	60.32 vs. 55.51	0.000*	9.57 vs. 6.52	0.000*	12.50 vs. 10.42	0.000*
Nursing vs. Medical Technology	57.64 vs. 55.51	0.004*	8.36 vs. 6.52	0.000*	10.74 vs. 10.42	0.701

*The level of significance is set at <0.05

Discussion

The study revealed that health science students have a high level of readiness in interprofessional learning. This can be correlated with the study done by Cant et al.⁶ who mentioned that a “training ward” program or a learning environment for teamwork and collaboration helped engage the students in a collaborative manner of care and provides additional knowledge on how interprofessional patient care is applied in the area. Guraya and Barr⁷ also identified positive outcomes of educational intervention by implementing IPE courses in several disciplines of healthcare.

In terms of overall readiness in interprofessional learning, pharmacy has a higher score as compared to nursing and medical technology students. This finding is supported by the study conducted by Umland et al.⁸ wherein there has also been a significantly higher score among pharmacy students than medical students, nursing, occupational therapy, and physical therapy. Pharmacy students also showed a significant difference in the factors of perception of actual cooperation and resource sharing within and across the profession. This shows that they have more positive attitudes and a higher level of readiness compared to other health disciplines. In addition, pharmacy students also showed higher mean scores in roles and responsibilities. However, this was contradicted by Frankel and Austin⁹, where they mentioned that pharmacists anecdotally reported that they do not feel responsible for their patients. The study identified possible barriers as to why pharmacists developed little confidence and responsibility which includes *role definitions*. Furthermore, the results revealed that pharmacists feel the public looks up to them as a business person behind a pharmacy and views their job as a service provider rather than a healthcare discipline.

Pharmacy students also got a higher mean score in positive professional identity. Van Huyssteen and Bheekie¹⁰ stated that pharmacy students perceived themselves as a pharmacist who are only dispensing medicines and advices people how to take their medication properly. With this information regarding the appreciation of pharmacy students, they tend to underestimate their job as a pharmacist leading to higher level of professional identity because of the level of simplicity based on their appreciation towards being a

pharmacist.

In the results of teamwork and collaboration, medical technology students had the highest score among other health discipline. Students who have already collaborated with colleagues from other departments in the clinical setting have a more positive attitude towards teamwork and collaboration¹¹. Medical technology students are known to have more interaction with other health discipline assuming complementary roles and cooperatively working together to carry out plans for an optimum patient care. Furthermore, another study suggested that a significant score regarding teamwork and collaboration implies that there is a generally positive attitude regarding shared learning and an acceptable degree of readiness towards IPE¹².

When it comes to the negative professional identity subscale, nursing scored the highest. They have been reported to be more receptive in the idea of collaborating with other health care discipline. In contrary to our findings, the study of Talkwakar et al.¹³ revealed nursing as the highest in the overall RIPLS and positive professional identity. This suggested that nursing students think more collaboratively, in contrast to other health disciplines who participated. Health disciplines attitudes regarding IPE known to have an effect on their acceptance of this approach to education. It was also suggested that this disparate finding which implies the differences in a specific health discipline may be attributable to cultural or educational background. Changing of these attitudes will be difficult but is one of the challenges that needs to be overcome in order to introduce effective IPE for health care disciplines¹⁴.

The results of the study were unanticipated because as pharmacy students are concerned, they work in diverse and evolving health care environment. Hence, pharmacy students need to learn competencies required to practice in collaborative approach. But based on the overall RIPLS score, they are the health discipline that has the highest level of readiness. My perception is based on the understanding that they are more prepared on a form of education that can provide a number of positive outcomes for other health care discipline including enhancing their awareness, improving their skills, understanding on how to function in an interprofessional team, reducing negative patient care outcome, and strengthening their communication and collaboration skills. As the need for

quality patient care becomes more complex, a thorough collaboration and teamwork from the different healthcare disciplines are needed. Further studies that could assess the effectiveness of educational intervention of IPE in healthcare disciplines may elucidate the importance of interprofessional learning to enhance patient care.

The study was reflected as a pioneering research as no local studies or literatures have been found similar to it.

Conclusions

The study revealed a high degree of readiness and positive attitude regarding the value of teamwork and interprofessional learning. Specifically, pharmacy students have more positive attitudes towards IPE as compared to other health disciplines.

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Ethical Clearance: Taken from Arellano University Ethics Review Board

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