Readiness To Learn And Interprofessional Knowledges : A Pilot Study Of Interprofessional Education In Health Polytechnic Tanjungkarang

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Abstract— The disparities in health services are generally due to lack of cooperation and responsibilities among health professionals and can cause the health services less qualified. The research design applied to Quasi-experimental. The sample of 147 participants was divided into 20 groups using a purposive sampling technique. The data collected using the Readiness Interprofessional Score (RIPLS) and the questionnaires on knowledge. The data analysis was done using The Paired T-Test. The results of the research showed that the initial mean value of IPE- readiness to learn before and after intervention was 59.40 and 62.13, there was a significant difference (p = 0.006). The mean value of IPE knowledge before and after the intervention was 51.19 and 74.54 and there was a significant difference (p = 0.011). The study program suggests revising the curriculum so that IPE learning is carried out in a structured manner with appropriate learning methods and evaluations.

Keywords— Knowledge, Readiness to learn, Interprofessional Education (IPE)

1 Introduction

In the health education system, Interprofessional Education (IPE) is an educational process involving two or more health professions, where students learn about other professions, learning to share an effective collaboration to improve the quality of health services [1] [2]. The interprofessional skills cannot emerge by itself; it means students must be trained from an early stage to gain knowledge and experience to work with other professions in a teamwork [3]. Nowadays, the application of IPE in the higher education of world health institutions is still limited, surveys from 42 countries showed that there is only 24.6% have applied IPE in their academic curriculum [1]. In Indonesia, the implementation of IPE is still less maximum, therefore it is necessary to socialize and develop IPE learning in higher education of health institutions that can facilitate the improvement of students' understanding and skills about IPE learning. A program of debriefing, at the beginning of clinical practice, will trigger students' positive perceptions about IPE. This condition requires the creativity of instructors/lecturers to design learning that will develop students' interprofessional skills [4].

The core competencies of IPE learning are divided into three parts; general competence, professional competence, and interprofessional competence. Interprofessional competency is an

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important competency to be mastered by health workers. There are four domains in interprofessional competence to be comprehended by students; values and ethics among health professions, communication with other health professions, roles, and responsibilities, and team-working [1][5]. Students are required to have readiness to learn when they are undergoing the IPE learning process. Its have an interprofessional readiness if he can meet the criteria of several competencies; knowledge, attitude, and psychomotor [3]. The readiness to learn can influence the learning of IPE; thus, students who have positive perception on IPE learning since they are at the academic stage, they will likely to develop their positive perceptions and more likely to engage in collaborating with other professional students when entering the clinical stage. The initial application (exposure) of IPE pilot project in the five Applied Bachelor Programs (PST) was carried out by applying learning models which aimed to introduce students about the learning experience (awareness) of interprofessional focusing on values, roles, and interprofessional communication to achieve cooperative competence and collaboration among health professions. The purpose of this study was to determine the effectiveness of the pilot project in interprofessional education (IPE) in The Tanjungkarang Health Polytechnic.

2 Methods

The research was administered for two days in October 2017. This research was research with the quasi-experimental design of pre and post-test without the control group. The sample of 147 students selected by purposive sampling technique was divided into 20 small groups consisting of 6-7 members from different health professions. The inclusion criteria were all students from the five programs study, the status of students must be active and required to follow all activities. The types of data were taken from readiness to learn and interprofessional knowledge collected using the Readiness for Interprofessional Learning Scale/RIPLS [6] and questionnaires on knowledge. The data collection technique was carried before IPE learning (pre-test) and after the completion (post-test). The instructional tools and materials needed during the learning process were listed as follows: a large class size, the lesson plans have been prepared beforehand as well as the module of IPE learning [7]. The research activities were divided into four learning sessions with each session lasting 170 minutes, consisting of opening, 20 minutes for IPE knowledge (pretest), 20 minutes for RIPLS, 30 minutes for review on IPE domain materials, 90 minuted for participatory learning using the Problem Based Learning (PBL) method or simulation/roleplay, and the last 10 minutes for closing or evaluation/students reflection. Univariate data analysis was carried out included frequency distribution, mean value, Standard deviation (SD), and lowest and highest scores. While bivariate analysis with paired dependent T-test to know the difference in the average value knowledge and readiness to learn interprofessional education.

3 Result and Discussion

The characteristic student of the apllied programme (PST) of Tanjungkarang Health Polytechnic in the research are follows:

Table 1 Frequency Distribution of Students of Applied Bachelor Programs in the IPE Debriefing at Poltekkes Tanjungkarang

Number	Description	Amount	Percentage
1	Rank of participation per major/study program		
	a. Participation		
	Nursing of Tanjungkarang	30	20,40%
	Midwifery of Tanjungkarang	26	17,69%
	Midwifery of Tanjungkarang	35	23,81%
	Environmental Sanitation	22	14,97%
	Medical Laboratory Engineering	34	23,13%
	Total	147	100%
	b. Zero Participation/Drop out		
	Nursing Tanjungkarang	6	26,09
	Midwifery Tanjungkarang	12	52,17
	Midwifery Tanjungkarang	2	8,70
	Environmental Sanitation	2	8,70
	Medical Laboratory Engineering	1	4,35
	Total	23	100
2.	Level		
	Semester 7	117	79,59
	Semester 5	30	20,41
	Total Number	147	100
3	Sex		
	Male	20	13,61
	Female	127	86,39
	Total	147	100

From table 1 it was found that PST students generally participated actively in debriefing activities (86.47%), followed by most seventh semester students (79.59%), and the majority of female students (86.39%) who come from five difference profession. In this study shows that as these health student applied interprofessional education. IPE was occurs when students from two or more professions learn about, from, and with each other to enable effective collaboration and improve health out- comes. Once students understand how to work interprofessionally, they are ready to enter the workplace as members of the collaborative practice team. This is a key step in moving health systems from fragmentation to a position of strength. Interprofessional healthcare teams understand how to optimize the skills of their members, share case management, and provide better health services to patients and the community. The resulting strengthened health system leads to improved health outcomes[8].

Table 2 The Difference on Readiness to Learn among Students of Applied Bachelor Programs in the IPE Debriefing at Poltekkes Tanjungkarang

Readiness to Learn	Mean	Standard Deviation	Standard of Error	Lowest Score	Highest Score	p value	n
Session 1	59,40	5,93	0,64	43	72	0.006	147
Session 4	62,13	7,43	0,81	48	76		

The results of the research evaluation showed that there were changes in the mean scores of IPE readiness to learn. The scores before debriefing were 59.40±5,93 and the lowest score was 43 and the highest was 72. After the debriefing was 62.13±7,43, the lowest score was 48 and the highest was 76. There were significant differences in the mean of readiness to learn before and after debriefing of IPE (p=0.006).

This finding is by following with a study [3] that lecturers shall have a positive readiness for IPE learning. The educational institutions are recommended to start developing models that are mutually agreed upon and supported by sufficient facilities and clear policies and regulations. Future studies are expected to explore more appropriate IPE learning models through qualitative and quantitative approaches. Readiness to learn is one aspect that affects learning outcomes. Students who already have readiness on IPE learning will try to respond positively to questions or instructions given by the facilitator. This can be enhanced by the assignment method, where students are asked to read and learn the IPE module a few days before the debriefing.[6] This research combined several interactive learning methods namely the assignment method, Problem Based Learning (PBL) and simulation/role play. In this research, the simulation was carried out by giving several case questions in family settings or primary health services guided by scenarios involving several professions like nurses, midwives, health analysts and environmental sanitation workers with a family approach. In this activity, students learned how to communicate, comprehend the roles and responsibilities of health workers, knowing the uniqueness of each health discipline and discussing how and when they should play such role so overlapping does not occur. [9] The learning experiences can be enhanced by each health professional by sharing knowledge about their roles, responsibilities, and authorities.

Table 3 The Difference in Means on IPE Knowledge among Students of Applied Bachelor Programs in the IPE Debriefing at Poltekkes Tanjungkarang

Knowledges	Mean	Median	Standard Deviasi	Standard of Error	Lowest Score	Highest Score	N	P Value
Pre Test	51,19	50,00	11,99	1.17	24	80	147	0,011
Post Test	74,54	74,00	13,92	1,36	48	100		

Table 3. Explains the mean value of IPE knowledge before debriefing that was 51.19 with a standard deviation of 11.99, the lowest score was 24 and the highest was 80. While the average value of IPE knowledge after the debriefing was 74.54 with a standard deviation of 13.92 with the lowest score of 48 and the highest of 100. There is a significant difference in IPE knowledge before and after IPE debriefing (p-value = 0.011). This is also line with [10] which states that participating in simulation learning is useful for improving knowledge and practicing interprofessional collaboration and communication skills. However, the evaluation of IPE outcomes regarding the increase in the average value of student readiness and knowledge in the debriefing activities is still under expectation. According to [11] the average score of students' readiness before debriefing was (59.40) and after debriefing (62.13) which means it is still categorized as 'insufficient' because the good score is 95. Likewise, the average score of knowledge, in which the average score before debriefing was 51.19 and after debriefing 74.5 is categorized as sufficient (≥ 51-≤75) because the category of a good score is ≥ 76-100.

This condition can be influenced by several things including the implementation of IPE learning which is carried out in form of debriefing activities, in which it was only administered in two days, a relatively short time to comprehend the domain competencies of the relatively new IPE course. Ideally, learning is carried out in a structured and gradual manner so that a

longitudinal internalization process occurs. A large number of students and a large class size also influences the formation of students' knowledge and readiness. Large classes will limit interaction and communication between lecturers and students and among students themselves. All Applied Bachelor Programs as the organizers of the learning program to immediately review and revise the curriculum to include the accomplishment of IPE learning outcomes. Through the curriculum, the organizer can prepare and plan to achieve the goal of IPE competencies starting from learning achievements, learning materials, learning methods, time and assessment mechanisms, therefore it is expected that IPE learning can run systematically, structured and measurable. Through curricular activities, the learning process of IPE is designed using effective learning methods by following the characteristics of the courses to achieve interprofessional abilities set in the course in the series of fulfillment of graduate learning outcomes

4 Conclusion

This research showed that equipping IPE with simulated learning methods and Problem Based Learning significantly increased the average value of learning readiness (p value = 0.006) an interprofessional knowledge (p value = 0.011). The accomplishment of interprofessional learning is still insufficient because the debriefing is only administered in a limited time so that the internalization process of IPE learning was unsatisfactory.

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