

Implementation of Interprofessional Education for Improving the Knowledge of Professional Role of Health Student through Maternal and Toddler Class (KIB (*Kelas Ibu Balita*)) in Cimahi City

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Abstract

One of health program that was expected to be able to reduce toddler morbidity rate was the use of Maternal and Child Health handbook (*Buku Kesehatan Ibu dan Anak (KIA handbook)*). The effort for improving the use of KIA handbook was by the implementation of maternal and child health class. Interprofessional collaboration could become an initiative for solution to improve the quality of health care. One of the efforts for realizing the collaboration among health professionals was by presenting early collaborative practice through educational process. Moreover, it was needed learning that was integrated by interprofessional health. The method which really supported the collaboration was Interprofessional Education (IPE). One of IPE competence was the knowledge of professional role. This research aimed at knowing the improvement of the professional role for health student before and after the implementation of IPE. The design that was used in this research was quantitative with observational method by using one group pre-posttest design. This research was conducted for 7 weeks. The data was collected by using observational sheet that was modified and validated from Interprofessional Collaborative Competencies Attainment Survey (ICCAS). Besides, the data was analyzed by using Paired t-test. However, the result of this research was there was an improvement of professional role of health student, before learning -0,4 became 0,52, and after IPE learning with p value =0,039. The result of this research could be concluded that the implementation of IPE learning could improve the knowledge of professional role for health students in Cimahi City, Indonesia.

Key words: Interprofessional Education, knowledge of professional role

I. INTRODUCTION

Toddler was one of populations that had the most risk of being suffered several kinds of health problem.¹ One of health programs was expected to be able to give active role in reducing the toddler's morbidity and mortality rate, which was by the use of Maternal and Child Health handbook (*KIA (Kesehatan Ibu dan Anak) handbook*).² One of the efforts that could be conducted for improving the ownership of KIA handbook for the mother was by implementing maternal and toddler class. At Public Health Center of Leuwigajah, the maternal and toddler class program had not ever been conducted although having facilitators who had been trained by Health Department. Moreover, it had not ever been conducted maternal and toddler class due to the limitation of health professionals at the Public Health Center. Thus, the major focus on that time was pregnant mother class.

According to the consideration, they really needed to teach the mothers about what the content of KIA handbook was and how to use it. One of the solutions was by conducting maternal and toddler class.² The efforts for improving the implementation of maternal and child class was needed innovative solution that was conducted by health professionals. The management of patient's problem which was done by health professionals was still as a singular professional and it had not been based on team work comprehensively from any kinds of any disciplines.³

Collaboration among health professionals had not been well before. In the field, it was still occurred an overlapping among the role of health professionals. One of them was due to the lack of understanding about health professional against the competence of other health professionals.⁴ Moreover, the collaboration among health professionals could become an initiative for solution to improve the quality of health care that could be given to the society.⁵

Health problem in community was very complex and the health professionals who worked in interprofessional team had to be able to fulfill the complex health needs. The implementation of maternal and child class which was by including various health professionals, such as midwives, nutritionists, and environmental health were expected to be able to give health care based on each proficiency (competence) and the perspective for each

profession. Effective cooperation among health professionals from various professions were the important key in improving the effectiveness of health care.

In Cimahi, there was either private health institution or governmental health institution, such as Institute of Health Science of Jenderal Ahmad Yani, Institute of Health Science of Budi Luhur, and Health Polytechnic of Ministry of Health in Bandung. According to previous research which was conducted by the researcher, in implementing learning in every institution had not been conducted in interprofessional, meanwhile, in curriculum of learning for every health professional there was a collaborative competence with other professions. The competence was only given in theory, particularly in ethics and communication subject. The effort for improving toddler's health status which was by improving the empowerment of toddler's mother was forming collaboration team among students of D3 midwifery, nursing, nutritionist, and environmental health in Cimahi.

Good collaboration among health professionals was very important. For realizing it, it was needed a learning that was integrated among health professionals.⁵⁻⁶ World Health Organization (WHO) gave a method that supported the collaboration which was by presenting Interprofessional Education (IPE).⁷ IPE was one of educational concepts which was integrated in order to improve the ability of collaboration. IPE was occurred if two or more students of different health programs learned together that aimed at improving a cooperation and quality of health care.⁸ One of IPE competences was the role and responsibility in collaborative practice. The implementation of interprofessional collaboration would be effective if every profession understood each role well in giving health care. The understanding of professional role and responsibility could be conducted in either academic stage or professional education.

A learning method that could be conducted in IPE learning was classical lecture, tutorial lecture, lab skills (stimulation), and field practice.^{8,10} According to conducted research by Bridges, *et al* (2011), learning in stimulation method and practice to society could form student's skills in communication, leadership, helping other students in understanding their professional competence, having an understanding about each professional role in collaborative practice team, and having advantages in socialization with other professionals.¹⁰

According to the background above, the researcher was interested to conduct a research of the implementation of Interprofessional Education for improving the knowledge of professional role for health students through maternal and toddler class in Cimahi. Furthermore, this research aimed at knowing the improvement of the knowledge of professional role for health students before and after the implementation of IPE.

II. METHOD

This research utilized observational method by quantitative approach and utilized one group pre test and posttest design. The samples in this research were 48 students who were from Department of Diploma III midwifery, nursing, nutritionist, and environmental health. Each sample of each department was 12 respondents. Technique of sample collection utilized simple random sampling in stratified quota. The samples of mother who had toddler (24-59 months old) were 120 mothers who were chosen by utilizing stratified random sampling for the technique of sample collection. The measured variable was the improvement of the knowledge of professional role before and after the implementation of IPE through maternal and toddlers class program. The data collection was conducted by utilizing observational checklist sheet that was modified and validated from Interprofessional Collaboration Competencies Attainment Survey (ICCAS). The students were given IPE learning by lecture method in class, group discussion, and field practice in community for 7 weeks. Below was the table of the flow of conducted research:

Table 1. Research Flow

Week	Activity
1	<ul style="list-style-type: none"> • Conducting assessment (pretest) to the health students by group discussion method and used observational checklist sheet that was modified and validated from Interprofessional Collaboration Competencies Attainment Survey (ICCAS) • Learning in the class about introductory lecture of IPE
2	<ul style="list-style-type: none"> • Learning in the class regarding professional role/responsibility
3	<ul style="list-style-type: none"> • Learning in the class regarding maternal and toddler class
4	<ul style="list-style-type: none"> • Field practice in community by conducting counseling in maternal and toddler class
5	<ul style="list-style-type: none"> • Field practice in community by conducting counseling in maternal and toddlers class

Week	Activity
6	• Conducting an assessment (posttest) to the health students by group discussion method and used observational checklist sheet that was modified from Interprofessional Collaboration Competencies Attainment Survey (ICCAS)
7	• The attitude assessment of the mothers regarding toddler's health

Analysis of bivariate data utilized Paired t-test. This research was conducted from December 2015 to January 2016 and cooperated with Public Health Center of Leuwigajah, South Cimahi. This research had been through ethic agreement of Faculty of Medicine, Universitas Padjadjaran. The implementation of this research was conducted by considering ethic aspect, which was justice, secrecy, and respecting respondent's prestige.

III. RESULT

Table 2. The Improvement of the Knowledge of Professional Role for Students of D3 Midwifery, Nursing, Nutritionist, and Environmental Health Before and After being Given IPE Learning

Knowledge of Professional Role		Observation		Delta	t _{count}	P value*
		Pre	Post			
Midwifery Students	\bar{X} (SD)	-1.4 (2.6)	-0.4 (2.6)			
	Median	-0.2	-0.9	2.6	-1.044	0.319
	Range	-6.3 – 0.96	-3.71 -6.31			
Nursing Students	\bar{X} (SD)	-0.2 (0.96)	0.83 (2.6)			
	Median	-0.2	0.81	1.6	-1.334	0.209
	Range	-1.80 – 1.2	-3.98 – 6.31			
Nutritionist Students	\bar{X} (SD)	0.2 (0.9)	1.2 (1.7)			
	Median	-0.02	0.98	1.03	-1.611	0.135
	Range	-1.27 – 1.76	-1.02 – 5.82			
Environmental Health Students	\bar{X} (SD)	-0.2 (2.3)	2.14 (2.7)			
	Median	-0.4	0.52	3.4	-0.602	0.559
	Range	-6.04 – 2.51	-2.82 – 6.70			
Total of Students	\bar{X} (SD)	-0.4 (1.9)	0.52 (2.4)			
	Median	-0.18	0.55	8.7	-2.129	0.039
	Range	-6.3 – 2.5	-4 – 6.7			

*Paired t test

Table 2 showed that the mean of knowledge of professional role before and after IPE learning improved from value of -0.4 to value of 0.52 (p=0.039). The improvement of the highest value was occurred to the environmental health students which was in 3.4. Meanwhile, the improvement of the lowest value was occurred to the nutritionist students which was in 1.03. Therefore, it could be concluded that there was a significant improvement of the knowledge of professional role for all health professional students after being given IPE learning.

IV. DISCUSSION

According to the result of Paired t test, there was a significant improvement of the knowledge of professional role before the learning, from -0,4 to be 0,52 after IPE learning with p value =0,039. Similar result of conducted research by Mackay (2002) and it was about perception of professional role for final-year students of midwifery, nursing, and radiography. It was obtained that there was a significant difference after the implementation of IPE module.¹¹ In addition, it was in accordance with conducted research by Suter *et al.* (2009) who found that health professionals in Alberta City had positive perception against the importance of understanding toward other professions.⁷ Furthermore, the understanding of each role and responsibility of a profession in health field would make the implementation of IPE learning much better. Thus, the students would be ready to cooperate in interprofessional team.¹²

However, this result of the research was different with conducted research by Aryakhiyati (2011) to the students of Universitas Gajah Mada (UGM) Indonesia. Based on the research, it was obtained that the component of professional role and responsibility had low assessment.¹³ It was in accordance with conducted research by Hakiman (2016) regarding perception of health professional students in Universitas Padjadjaran Indonesia against

Interprofessional Education, which was obtained that the result of his research was there still less understanding toward other health professionals.¹⁷ According to Hall (2005), less maximum of understanding against other professions was caused by there still a confusion of role among health professionals, such as doctor and nurse. The implementation of IPE in learning system was expected to be able to clear each role and responsibility of the profession.⁵ IPE was an educational form that was recommended by WHO in order to supported collaborative practice. IPE was occurred if two or more health professionals learned together, from, and understood each other to realize effective collaboration. IPE educated knowledge and basic skills for interprofessional collaboration in education period and for being able to be started, even, since in academic stage of health science education.

Implementation of learning in this research utilized lecture method, group discussion method, and field practice in community which was proved effectively to be used in IPE learning. This was proved by there was higher improvement in post-test value that was 0,52 rather than pre-test value that was -0,4. This result was in accordance with conducted research by Tyastuti (2013), which stated that practice in society was one of the learning model forms with intra-discipline approach. This approach model combined skills, knowledge, or even attitude and behavior. Thus, by practicing to society, it was expected that the students could solve the problem by collaborating in accordance with their own profession.¹⁴ Moreover, this was strengthened by conducted research by Ateah (2011), that group discussion learning could improve communication skills and the students could respect other professions.

Based on this research, it was obtained the result that there was a significant improvement of the knowledge of professional role for all department students with delta value of 8,7. This result was appropriate with conducted research by MacDonald (2010), and he stated that the students who joined in IPE group became clearer and more understood about each professional role. Besides, the students also felt more effective in doing an action, thus, they could evaluate the problem that was from their own disciplines.¹⁵

Based on the result of observation from the facilitator, it was obtained that the improvement of the knowledge was different for each department. This could be influenced by curriculum and practice experience from each department. Furthermore, this was supported by conducted research by McFadyen (2007) who stated that the component of understanding against other professions was obtained good value for the academic students who had experience in clinical practice.⁹ According to Morison (2003), the students who had understanding toward other professions and good value while having lecture could improve the relationship of interprofessionals in giving care to patients.¹⁵

The result of statistical test in this research showed that the highest improvement of the knowledge of professional role was in environmental health students rather than nursing students, midwifery students, and nutritionist student with delta value of 3,4. The student's characteristic of environmental health department who became this research subject on the average had GPA with honorable predicate and very satisfactory predicate. According to Naam (2009), the student's quality could be seen from the obtained academic achievements. The academic achievement was a change in proficiency, behavior, or competence that could improve for several times by learning. Academic achievement became a benchmark of student's understanding rate toward certain given material after the students suffered learning process in certain time.^{16,17}

In this research, the improvement of the knowledge of professional role for midwifery students was 2,6. All of midwifery students were female and this was in accordance with conducted research by Sartini (1998) who tested the gender influence toward learning achievement. Her research showed that female tended to have better academic achievement rather than male. Female was known to tend more diligent in learning and involving the campus activity that supported learning process. Meanwhile, male students were more interested for either entertains campus activity or sporty campus activity.¹⁹ Moreover, it was different with conducted research by Ulung (2014). He stated that male respondents tended to have better understanding of perception toward other professions rather than female respondents.³

Either nursing students or nutritionist students who were involved in this research were the members of students' organization (HIMA) in each department. The activity that was joined by the students through organization would give strong influence toward their lecture. The student's participation in an organization would give an influence toward his/her academic achievements. Hence, it was expected that the active students in an organization would have better academic achievement. The organizational activity was a method for improving themselves, containing creativity, distributing talent, improving knowledge, training the cooperation, increasing the insight, and building a confidence. This was appropriate with conducted research by Budianto (2014) who stated that student's activity in organization was a right method in developing themselves and helping to stimulate learning achievement. In student's organization, they were familiarized for developing cognitive achievement, personality,

and social. In cognitive side, the students must be smart to divide their times for various activities. The student's personality side was trained for being responsible, discipline, and honest. In social side, the students would be nurtured for being easy to associate and easy to communicate.¹⁸

This was supported by conducted research by Susanto (2011) toward students of Faculty of Engineering in State University of Malang, East Java Indonesia. He proved that student's academic achievement who was active in organization tended to have higher achievement rather than student who was not active in organization. Students' organization was a facility for students to improve insight in either academic knowledge or social knowledge, thus, it could help in improving their learning achievement and the competence in socializing with society. This result was strengthened by Smith and Griffin's opinion that student's participation in campus organization could improve student's academic achievement.¹⁸

If it was seen from the research result in each department, there was no significant difference between before and after learning. This was influenced by IPE learning activity that was conducted in extracurricular activity. IPE learning was conducted when the midwifery students and nursing students did filed practice. Meanwhile, environmental health students and nutritionist students evaluated the filed practice. Thus, it influenced student's attitude in implementation the research. However, there were also some students who were less active in group discussion, hence, it influenced the facilitator's assessment toward the students. Based on some theories regarding learning, the success of learning was influenced by motivation, interest, interaction, and student's attitude. Motivation in learning was a support that was owned by human for doing an activity, such as learning. The interest in having important role toward learning result was because he/ she had a role as a power that would support other students to learn. Student's interaction with other students was one of the factors that influenced toward student's learning result. Good interaction could cause motivation for other students to learn. Meanwhile, attitude was someone's tendency or willingness for behaving certainly while facing a certain stimulation to either positive side or negative one.^{19,20}

The advantages that could be had by the students after following this research was the improvement of their knowledge and awareness regarding role and responsibility, understanding team work with other health professionals, understanding how to work in interprofessional, hence, it could nurture the student's readiness to be placed as a member of collaborative team. This was appropriate with conducted research by Gilbert (2005) who stated that the students who joined IPE became more understanding of what they should do for each profession in each occupation, improving strong professional relationship in respecting each role, and being able to identify the competence for either their own profession or other professions.⁸

Furthermore, this research was conducted in extracurricular activity, thus, it had possibility to be occurred refraction. Some research subjects were doing evaluation and field practice, thus, it influenced student's condition while researching.

V. CONCLUSION

The result of this research could be concluded that the implementation of IPE learning could improve the knowledge of professional role for health professional students in Cimahi. Besides, it was suggested for institutes of health education for applying IPE learning in their educational curriculum.

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