

## **A STUDY ON THE EFFECTIVENESS OF INTERPROFESSIONAL COLLABORATIVE TRAINING IN ENHANCING INTERPROFESSIONAL COMMUNICATION AND TEAMWORK AMONG NURSES AT X HOSPITAL JAKARTA**

**Theresia Kurniasih<sup>1</sup>, Asnet Leo Bunga<sup>2</sup>, Sudibyo Supardi<sup>3</sup>**

<sup>1,2</sup>RSIA Kemang Medical Care, Indonesia

<sup>2</sup>STIK Sint Carolus, Indonesia

<sup>3</sup>Badan Riset Inovasi Nasional, Indonesia

Email: teredave@gmail.com

---

### **Abstract**

The establishment and maintenance of effective relationships between professionals is referred to as interprofessional collaboration. This study aimed to assess the effectiveness of multidisciplinary collaborative practice training in improving communication and teamwork among professionals at RSIA X Jakarta. The study used a quasi-experimental design with a sample size of 35 nurses who were given Interprofessional Collaborative Practice training and 35 nurses as controls, with the criteria of having held the positions of Supervisor, Nurse on Duty and Head of Nursing department. Collaborative Practice Assessment Tool (CPAT) questionnaire was used to collect data. For data analysis, chi-square tests and multiple logistic regression tests were used to answer the research hypotheses. The study results showed that Interprofessional Collaborative Practice Training was found to improve nurse interprofessional communication ( $p=0,029$ ) and nurse teamwork ( $p=0,000$ ). Nurses who received IPCP training increased their chances of teamwork 13.1 times higher compared to nurses who did not receive training (control). This study recommends the need to conduct additional study involving respondents from various professions and the need to provide Interprofessional Collaborative Practice Training to all professional teams in the hospital. Mapping the career path is necessary to ensuring that the achievement of each level of clinical nurse structure are well balanced. A strategic plan is necessary to be implemented to achieve nurse education level up to the baccalaureate level and regulation must be reinforced to create interprofessional collaboration culture in the hospital.

---

**Keywords:** Interprofesional Collaborative Practice, Training, Teamwork, Interprofessional Communication

---

## **INTRODUCTION**

Nursing services play a significant role in determining hospital quality. Hence, all initiatives to improve hospital services also endeavor to enhance the quality of

nursing services. The modern approach to health services involves a holistic approach that looks at human in terms of their thought, emotions, lifestyle and social environment as a whole (for Nursing et al., 2021).

The role of nurses as interpersonal collaborator among Professional Care Providers (PCPs) is very crucial towards hospital services improvement. According to the Indonesia Health Ministerial Decree No.HK.01.07/MENKES/1128/2022 regarding Hospital Accreditation Standards states that good multidisciplinary collaboration between all clinical and non-clinical staff is expected to be able to provide the best services to clients, working together as an interdisciplinary team with interprofessional collaboration using applicable standards and regulations.

The 2022 Hospital Accreditation Standards state that the primary goal of hospitals and their staff is to provide safe and effective care and services to their patient. To ensure that care delivery is responsive to each patient's individual needs, effective communication, collaboration and standardization are among the variables that must be implemented. All Professional Care Providers (PCPs) must work together as a multidisciplinary team, collaborating with other professionals to coordinate and integrate care and service delivery.

Different patients have different needs, each with its own complex of health conditions. Overcoming the health problems that arise requires multiple scientific disciplines. The Institute of Medicine of the Committee on Quality Health Care in 2021 recommended that health care providers work in multidisciplinary teams and communicate with each other to address patient's complex needs. Through this interprofessional approach, healthcare providers can pool their knowledge and perspectives to work towards the common objective of restoring or preserving patient health.

Collaboration among interprofessionals fosters effective interprofessional relationships and strengthen the relationships between students, healthcare providers, patients/clients/families, and the community to achieve optimal health outcomes. (Canadian Interprofessional Health Collaborative, 2016). Mutual respect, trust, and cooperation are essential components of such collaboration. In order to support patients, families or communities through interprofessional communication, interprofessional teams are expected to be able to work cooperatively, integrating their individual roles and responsibilities, optimizing team functions, and exercising collaborative leadership. Effective interprofessional communication depends on the ability of the participants to see various types of transitions that differ according to their profession and become more cooperative. This is supported by research conducted by Engel et al., (2013) on the Interprofessional Education Collaborative, which states that it is critical to increase knowledge about specific topics through interprofessional collaboration in clinical practice.

The World Health Organization states that there is a need to improve the health-care system based on the first principle of health-care delivery, which is one of the most significant challenges for those responsible for developing health-care policies, managers, and citizens around the world. They are looking for an innovative system of change that can improve the quality of the healthcare system by fostering interprofessional collaboration (WHO, 2014).

In 2016, IPEC reintroduced core competencies aimed at enhancing existing competencies in the domain of interprofessional collaboration and enhancing competencies to better integrate health promotion efforts across all health professions

while also increasing collaboration to improve the health of individuals and communities. By fostering an understanding that interprofessional collaboration is a key component of safe, high-quality patient-centered care. Emphasis on core competencies is a result of Schumacher et al., (2013) who illustrate eight domains in interprofessional practical collaboration, namely: values/ethics, roles/responsibilities, interprofessional communication, and teamwork. All of this adds up to patient and family centered care (Sevin et al., 2016).

King (1981) possessed a personal philosophy about humanity and life that was primarily concerned with relationships to the environment, health, individuality, and other people. King has a conceptual system and goal-achieving theory based on the general assumption that human interaction with the environment affects people's health and serves as a means of assisting them in fulfilling their social roles. King Alligood, (2014) developed the Dynamic Interacting Systems theory, which builds its interaction systems framework using a systems method. This theory aims to understand and comprehend "Changes and Complexities in Health Organizations." Tuffin, (2016) used the systemic approach to conceptual development and the middle range theory, or goal attainment theory.

King discovered that several scientists have been studying the system, and that the most effective way to learn about human interaction with the environment is to develop a framework, a concept about a variable that is likely to be beneficial, and a concept known as dynamic theory. Interacting System is made up of three systems: 1) Personal System, 2) Interpersonal System, and 3) Social System. The three system of dynamic system theory is very much related to the daily challenges of interprofessional collaboration with professional skills and ethics, role and responsibility, interprofessional communication, and teamwork.

## **RESEARCH METHODS**

This is a quantitative study that use a quasi-experimental pre-post test design to examine the causal relationship between one variable in one (or more) experimental groups and comparing the results to a control group that did not receive treatment. The study was carried out in 2023 between June and August. RSIA X Tangerang served as the control group, and RSIA X Jakarta served as the intervention group. conducted following the acquisition of research authorization from the Director of RSIA and ethical clearance from the STIK Saint Carolus Research and Development Ethics Committee (No: 098/KEPPKSTIKSC/VI/2023).

In this study, the experimental group consisted of nurses working at RSIA X in South Jakarta as the head of the nursing unit, Duty Officer, and Shift Coordinator, while the control group consisted of nurses working at RSIA X Tangerang as the head of the nursery unit, Duty Officer, and Shift Coordinator. Sample size was calculated using Lemeshow's (1997) Quasi Experiment technique, utilizing a total of seventy nurses who met the following inclusion criteria: PK Level 1, PK Level 2, and PK Level 3; role as Head of Nursing Unit; Shift Coordinator and Duty Officer; and Nurse working more than two years (Irish et al., 2021).

Pre-PK nurses and nurses who serve as executive staff are the exclusionary criteria. The Collaborative Practice Assessment Tool (CPAT) was employed in this study. The CPAT is deemed realisable since it has three open questions, 56 statement items, eight subscales, and a Cronbach alpha value of 0.916 (YUSRA, 2017). According to YUSRA, (2017), the CPAT instrument version of Indonesia has been

pronounced realizable based on the validity and realisability test findings, which show a Cronbach alfa value of 0.916.

Ethical guidelines are followed when doing research to ensure that participants are protected, benefit, and are not harmed. According to the National Health Research and Development Ethics Committee (2020) in Agrawal & Gupta, (2022), by using the ethical guidelines employed in health research

#### Data Analysis

1. Univariate analysis: data is presented as a frequency distribution (for categorical data) or as statistical descriptors (mean values, defaults, minimum values, maximum values) for numerical data.
2. Bivariate analysis: a non-parametric statistical test of the Wilcoxon test to determine the difference between before and after intervention.
3. Multivariate analysis was employed, as well as multiple logistic regression testing.

## RESULT AND DISCUSSION

### Univariate

**Table 1. Age distribution, career level and education of nurses at RSIA X Jakarta, 2023**

Characteristic	Case		Control	
	Σ	%	Σ	%
<b>Age</b>				
21-30 yo	11	31%	12	34%
31-40 yo	19	54%	15	43%
> 40 yo	5	15%	8	23%
<b>Education</b>				
Nursing Diploma	31	89%	12	34%
Ners	4	11%	23	66%
<b>Career Level</b>				
PK1	8	23%	0	0%
PK2	17	49%	30	86%
PK3	10	28%	5	14%
Total	35	100	35	100

Table 1 demonstrates that the intervention group (54%) and control group (43%), respectively, had the highest percentage of responders aged 31 to 40 years. This demonstrates that the age group in both groups, experimental and control, is a general category that includes the age range from late adolescence to nearing late adulthood Kemenkes RI, (2007), where a person has the desire and willingness to be able to develop yourself and follow current developments.

According to the educational level of nurses, the intervention group had the highest proportion of Diploma 3 of Nurses (89%) while the control group had the highest percentage of Bachelor's Degree in Nursing (66%). This demonstrates that Diploma 3 of Nurses continues to dominate the fulfillment of the degree of Nursing HR education in the intervention group.

The intervention group had the highest percentage of nurses in PK2 (49%), while the control group had the highest percentage in PK2 (86%).

**Table 2. Distribution of Interprofessional Communication**

Group	Interprofessional Communication			
	Improved		Not Improved	
	Σ	%	Σ	%
Case	19	54%	16	46%
Control	10	29%	25	71%

A total of 54% of respondents reported an improvement in the interprofessional communication variable for nurses following the intervention, whereas 5 statements had the lowest outcomes (<80%). In contrast, sixty-three percent of respondents reported an increase in the nursing team collaboration variable, and one statement had the lowest result (less than eighty percent) in the team collaboration distribution.

This indicates that the age group is within the range of late adolescent to late adulthood Chan, (2009), which is the age range in which an individual is eager to follow current developments and has the desire and ability to grow personally. Education continues to be dominated by Diploma 3 of Nurse has limited authority and duty and is classified as a vocational nurse. completion of PK 2 professional level, allowing you to offer comprehensive nursing care but still requiring supervision when managing patients with challenging issues.

**Table 3. Distribution of Teamwork**

Group	Teamwork			
	Improved		Not Improved	
	Σ	%	Σ	%
Case	22	63%	13	37%
Control	4	11%	31	89%

Table 3 presents statistics on the increase in the teamwork variable in the intervention group, where 63% of respondents rose, implying that those who increased outnumbered those who did not, whereas 89% of those in the control group did not increase. This is consistent with Hani et al., (2021) affective training aims, which suggest that training can improve a person's feelings, values, and attitudes, allowing them to alter a person's attitudes or conduct. Meanwhile, the cognitive category can help to boost understanding and analyzing skills. These are the points at which someone must be able to create interprofessional teamwork.

**Bivariate:**

**Table 4. Differences in Interprofessional Communication Scores of Nurses in the intervention and control groups before and after IPCP training at RSIA X Jakarta, 2023**

Interprofessional Communication	Mean Pre-%	Mean Post-%	Pre to Post % Difference	% Increase	pValue
Case	12,73	19,08	6,35	0,50%	0,065
Control	11,9	9,1	-2,8	-0,23%	0,59

Table 2 showed that the average interprofessional communication score of the intervention group's nurses was 12.73 prior to training, and it increased by 0.50% to 19.08 after training. The results show that there is no significant difference in the interprofessional communication scores of nurses in the intervention group before

and after Collaborative Practical Interprofessional training (pvalue = 0.065;  $> \alpha = 0.05$ ), indicating that  $H_a$  is rejected. In the meantime, p-value = 0.59 ( $> \alpha = 0.05$ ) in the control group.

Elizabeth & Arnold, (2016) cites research that indicates that in addition to training, system development, and strong support are also necessary for the creation of effective interprofessional communication. To ensure interprofessional communication is implemented effectively, all hospital professionals must participate in its implementation.

**Table 5 Differences in Teamwork Scores of Nurses in the Intervention and Control Groups Before and after IPCP Training at RSIA X Jakarta, 2023**

Teamwork	Mean Pre-%	Mean Post-%	Pre to Post % Difference	% Increase	p Value
Case	12,3	18,41	6,11	0,50%	0,008
Control	7,55	7,38	-0,17	-0,02%	0,59

In the intervention group, there was a statistically significant difference in nursing teamwork scores before and after Interprofessional Collaborative Practice training (p value = 0.008)  $H_a$ .

This demonstrates how interprofessional collaborative practice training can help you develop the competencies needed for effective teamwork, such as self-awareness of your professional strengths and limitations, an appreciation of individual diversity, the capacity to create a system of perspectives, professional policies, and problem-solving abilities. advantageous (Elizabeth & Arnold, 2016).

## Multivariate

**Table 6. Multivariate Test Result**

Variable	B	SE	Sign	Exp B	CI 95%	
					Lower	Upper
Step 1						
TRAINING	2.505	.753	.001	12.246	2.799	53.583
Career Level	-.199	.605	.742	.820	.251	2.680
Education	-.185	.802	.817	.831	.172	4.005
Step 2						
TRAINING	2.599	.644	.000	13.446	3.807	47.488
Career Level	-.202	.603	.737	.817	.250	.2665
Step 3						
TRAINING	2.574	.636	.000	13.115	3.770	45.629

As an extension of the previous test, the Multivariate test results are shown in Table 1 in order to assess the variables that have the greatest impact on raising the nurse teamwork score from the Interprofessional Collaborative Practice Training variable. With a sign value of 0.000 and an Exp (B) value of 13.115, the multivariate logistic regression test's final results demonstrate the influence of Interprofessional Collaborative Practice training on enhancing teamwork among nurses. This means that nurses who receive Interprofessional Collaborative Practice Training can increase teamwork by 13.12 times more than control nurses. The rise in nursing teamwork was unaffected by the findings of the confounding variable study.

Teamwork in nursing entails communication and cooperation among nurses, doctors, and other health-care professionals. Arnold et al., (2022) further states that

staff expectations, norms, attitudes, and beliefs are all part of the collaborative culture. In order to establish a health team that works, there needs to be a greater understanding of the importance of teamwork over individual liberty. Thus, in order to develop this, extensive and ongoing training across all professional domains is required. This statement is also consistent with Kandouw, (2021) research, which shows that employee performance is positively impacted by cooperation.

The researcher also believes that training can help people become more knowledgeable, but it can also help them become more skilled, which in turn helps them perform and behave more differently. Raising awareness of the fundamental skills required to enhance cooperation will foster a work environment that encourages coordination and collaboration through effective teamwork. will enhance an individual's performance.

## **CONCLUSION**

At the research location, the majority of nurses were between the ages of 31 and 40, with a career level of PK 2. Those in the intervention group were more likely to have a Diploma 3 in Nursing. Five statements had the lowest outcomes (<80%) in the interprofessional communication variable for nurses, with 54% of respondents reporting improvement after receiving the intervention. Sixty-three percent of respondents reported an increase in the nursing team collaboration variable, and one statement had the lowest result (less than eighty percent) in the teamwork distribution.

The interprofessional communication scores of the intervention and control groups' nurses did not differ significantly before and after Interprofessional Collaborative Practical training ( $p$  value = 0.065). The nursing teamwork scores of the intervention group showed a significant difference ( $p$  value = 0.008)  $H_a$  between before and after Interprofessional Collaborative Practice training. Following Interprofessional Collaborative Practice training, there was a substantial impact on the intervention group's score for improving nurses' interprofessional communication ( $p$  value = 0.029). There is a significant effect on the score of increasing teamwork among nurses after Interprofessional Collaborative Practice Training in the intervention group ( $p$  value = 0.000). Nurses who received Interprofessional Collaborative Practice Training increased their chances of teamwork 13.1 times compared to nurses who did not receive training (control).

## **BIBLIOGRAPHY**

- Agrawal, N. K., & Gupta, U. (2022). Present status of department of health research registered ethics committees in India after implementation of new drugs and clinical trials rules 2019. *Journal of Medical Evidence*, 3(3), 211–218.
- Allgood, M. R. (2014). Areas for further development of theory-based nursing practice. *Nursing Theory: Utilization & Application*. 5th Ed. St. Louis: Elsevier Mosby, 414–424.
- Arnold, M., Morgan, E., Rungay, H., Mafra, A., Singh, D., Laversanne, M., Vignat, J., Galow, J. R., Cardoso, F., & Siesling, S. (2022). Current and future burden of breast cancer: Global statistics for 2020 and 2040. *The Breast*, 66, 15–23.
- Chan, M. (2009). World now at the start of 2009 influenza pandemic.
- Elizabeth, C., & Arnold, K. U. B. (2016). *Interpersonal Relationships: Professional Communication Skills For Nurses*. Elsevier.

- Engel, L. C., Kington, A., & Mleczko, A. (2013). The influence of education on community cohesion: Adaptation of policy to practice. *The Journal of Educational Research*, 106(5), 408–418.
- for Nursing, O. R., Ernstmeyer, K., & Christman, E. (2021). Nursing Process. In *Nursing Fundamentals* [Internet]. Chippewa Valley Technical College.
- Hani, S., Manusia, S. D., Press, G. M., Mondy, W. R., Edisi, S., Nitisemito, A. S., Indonesia, G., Rivai, V., Kencana, M., & Samsudin, S. H. (2021). *Buku Laporan Keuangan Ukm Syariah*. Kumpulan Berkas Kepangkatan Dosen.
- Irish, A. M., White, J. S., Modrek, S., & Hamad, R. (2021). Paid family leave and mental health in the US: A quasi-experimental study of state policies. *American Journal of Preventive Medicine*, 61(2), 182–191.
- Kandouw, T. A. K. (2021). Pengaruh Kesetiaan, Komitmen Organisasi, dan Kerjasama Tim Terhadap Kinerja Karyawan Di Perusahaan Holland Bakery Cabang Boulevard Manado. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi*, 9(1).
- Kemenkes RI. (2007). Peraturan Menteri Kesehatan Republik Indonesia No. 512/Menkes/Per/Iv/2007 Tentang Izin Praktik Dan Pelaksanaan Praktik Kedokteran Menteri Kesehatan Republik Indonesia (Vol. 7, Issue 3, pp. 213–221).
- Schumacher, D. J., Englander, R., & Carraccio, C. (2013). Developing the master learner: applying learning theory to the learner, the teacher, and the learning environment. *Academic Medicine*, 88(11), 1635–1645.
- Sevin, A. M., Hale, K. M., Brown, N. V., & McAuley, J. W. (2016). Assessing interprofessional education collaborative competencies in service-learning course. *American Journal of Pharmaceutical Education*, 80(2), 32.
- Tuffin, R. (2016). Implications of complexity theory for clinical practice and healthcare organization. *Bja Education*, 16(10), 349–352.
- WHO. (2014). *World's Adolescents A second chance in the second decade*. World Health Organization, 3–6.
- YUSRA, R. Y. (2017). Validasi Collaborative Practice Assessment Tool (CPAT) dalam konteks pelayanan kesehatan di Indonesia= Validation of Collaborative Practice Assessment Tool (CPAT) in Indonesian healthcare setting.

**Copyright holders:**

**Theresia Kurniasih, Asnet Leo Bunga, Sudiby Suparadi (2024)**

**First publication right:**

**AJHS - Asian Journal of Healthy and Science**



**This article is licensed under a Creative Commons Attribution-ShareAlike 4.0 International**