Literature Review: Effect of Interprofessional Collaboration Implementation of Patient Services

Kajian Pustaka: Pengaruh Pelaksanaan Kolaborasi Interprofesional Terhadap Pelayanan Pasien

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ABSTRACT

Introduction: At present progress in the health, the sector requires health workers to provide professional services. The patient's problem is also increasingly complex. Health workers are required to work in an integrated manner, therefore good collaboration and collaboration between healthcare professionals is needed in realizing patient satisfaction. Health services in hospitals are carried out by various health professionals. Effective interprofessional collaboration practices are key to providing health services. The management of the patient's health and all actions must be patient-focused. The model of providing care with interprofessional collaboration is very important so that all services are coordinated and there is good communication between caregivers. This study aims to find out about the effect of implementing interprofessional collaboration on patients. Methods: This research is a literature review. The research source was taken from several databases, with the keywords "Interprofessional collaboration, patient safety, health services". The Google Scholar database was found in 15,455 journals, EBSCO found 32, NCBI found 98, MEDLINE 23, and ProQuest 61. From the total database, only 11 met the inclusion criteria. Results: This meta-analysis shows that interprofessional collaboration has a positive impact. There are several benefits obtained from the application of interprofessional collaboration, namely affecting patient safety, patient quality of life, reducing the risk of falls, preventing medication errors, increasing the patient's functional status. elderly patients. Conclusion: Interprofessional collaboration or Interprofessional Collaboration (IPC) is collaboration between people with different professional backgrounds and working together to solve patient health problems and realize professional health services that focus on patients.

Keywords: health services, interprofessional collaboration (ipc), patient safety

Kata kunci: interprofessional collaboration (ipc), keselamatan pasien, pelayanan kesehatan

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INTRODUCTION

Interprofessional Collaboration is a collaboration between various health professions in the form of a team that aims to improve patient health within the boundaries or authority of each profession. In producing effective collaboration, a learning technique is needed, namely Interprofessional Education (IPE), which studies collaborative competencies so that they can be applied in actual work practices. Effective interprofessional collaborative practice is key to providing patient-focused health care. The health care system of the future depends on how health care professionals redefine the way to work together (Lestari, Saleh and Pasinringi, 2017).

Interdisciplinary practice or interprofessional collaboration of health teams involving healthcare professionals and patients aims to make joint decisions about patient health issues (Hustoft et al., 2018). Good communication and collaboration between caregivers will determine the goals of care and improve the quality of life of patients (Rezapoor et al., 2017). The main purpose of this literature review is to provide a systematic research review of the effects of implementing interprofessional collaboration for patients. Cooperation within the health team aims to provide the right service, be carried out by the right profession, and done in the right place. Building and maintaining health team collaboration is very much needed to provide optimal and professional health services to patients and to improve patient safety (Hustoft et al., 2018).

The interdisciplinary service team emphasizes using a holistic approach, working interdependently, using communication effectively to ensure that the various needs of patients for health care are addressed and served in an integrated manner (Brown et al., 2018). Interprofessional collaboration is a basic competency for caregivers (doctors, nurses, pharmacy, nutrition, physiotherapy, and other health workers) in providing patient care.

The main key that can increase good interprofessional collaboration in providing health services to patients and the community is effective communication. With effective communication good collaboration will be established between the care giver professions.

One form of communication that can be done in a hospital is the Situation, Background, Assessment, Recommendation (SBAR) communication. This method involves all professions to communicate the care provided. The patient doctor will review all treatment documentation provided via the SBAR communication. SBAR communication can be carried out with a collaborative approach from doctors, nurses, midwives, nutritionists, pharmacists, physiotherapists, and other professions related to health services for patients. In this SBAR communication, what is meant by situation is a description of the patient's actual condition, a description of the condition of the disease and changes that occur in the patient's body, including vital signs and supporting physical examinations. SBAR communication background indicates a previous history of disease. Assessment is to provide an assessment of the patient's condition, while the recommendation is to provide recommendations related to the patient's health condition. This form of SBAR communication can play an important role in transferring information from one profession to another, resulting in interaction and collaboration between professions. The main factor for improving the quality of professional patient care services, reducing errors in medication and medication errors (Irajpour et al., 2019). Collaboration with nutritionists can improve the accuracy of meeting nutritional needs according to the patient's medical condition so that the patient's nutritional problems can be handled appropriately.

Interprofessional collaboration can also prevent patients from falling into the elderly (Brown et al., 2018). Falling patients can be prevented because when the patient begins to be treated has received a comprehensive assessment so that the patient's condition can be handled immediately, medic therapists can immediately know the patient's condition and immediately take steps to prevent falling patients. Fall re-assessment was done by nurses. This study aims to find out about the effect of implementing interprofessional collaboration on patients.

METHODS

This study aims to explore the effect of interprofessional collaboration implementation of patient services. Literature Search was conducted...
in December 2019. Researchers searched for data sources using several databases namely Google Scholar, EBSCO, NCBI, MEDLINE, and ProQuest were searched by connecting MeSH-major topic terms of “interprofessional collaboration, healthcare professionals, multi professional, hospital, effectiveness, Collaborative practice. Researchers provide limitations for searching related journals, namely between 2015-2019, to find valid sources that are not out of date and in accordance with the times.

Inclusion Criteria: The inclusion criteria included in the selection of this literature review study are: Journals must be related to Interprofessional Collaboration, this study must provide information about the benefits of Interprofessional Collaboration for patients, the complete text of the journal must be available in English and Indonesian. Exclusion Criteria: Not related to interprofessional collaboration, non-original articles such as letters to editors, abstracts only, and editorials.

Data Selection and Analysis: the journals were selected by researchers independently. Each database is searched by using the same keywords, "Interprofessional collaboration, patient safety, health services". During data synthesis, 15,669 articles via database search ProQuest, Google Scholar, NCBI, EBSCO, MEDLINE. 1,444 studies were excluded after reviewing titles, 8,550 were excluded after reading abstracts. 5,675 studies were found relevant because they empirically explored the effectiveness of IPC in the health care system. During the full-text analysis of 5,675 studies, other 4,525 articles were excluded because the data did not meet the inclusion criteria and were conducted outside the hospital. This systematic review ultimately selected 11 relevant studies that fit the established criteria.

Figure 1 describes the process of selecting articles according to the guidelines from the Preferred Reporting Literature Reviews and Meta-analysis (PRISMA) (Moher et al., 2009). The initial search resulted in a total of 15,669 articles showing high relevance to the topics reviewed between 2015-2020. After duplicating articles and filtering titles and abstracts, 1,150 articles entered the next stage, namely full text review and eligibility based on inclusion and exclusion criteria. has been determined by the researcher. The 11 research articles that met the requirements were then reviewed for quality and synthesized in this final literature review report.

![Figure 1. PRISMA Flow Diagram of Literature Review Process for Studies of Effects of Interprofessional Collaboration Implementation](image-url)
RESULT

The result of this study is that the application of interprofessional collaboration is needed to support the improvement of patient safety. In communicating between doctors, nurses, pharmacists, it can be done by discussing the patient's condition, by recording the patient's status so that the patient's needs are like medication, prescription drugs and other medical actions according to patient needs by checking again and ensuring the patient's identity. One of the benefits of interprofessional collaboration is preventing medication errors. Irajpour et al (2019), in their research with a quasi-experimental study method (single group, before and after) in 2017. The study was conducted in the ICU room of a teaching hospital collaboration with the Isfahan University of Medical Sciences located in Central Iran with a total of 23 beds. Participants include 50 members of the health care team (doctors, nurses, and clinical pharmacists) with at least 1 year of work experience in the ICU. Participants were selected using the census sampling method. Data were collected using a self-made two-part questionnaire. Data were analyzed using descriptive, statistical analytic, and version 16 of the SPSS software (P <0.05). The results showed that the incidence of medication errors was significantly lower after the implementation of interprofessional collaboration (P <0.001) between doctors, nurses, and clinical pharmacists.

The implementation of interdisciplinary team provides benefits in improving the functional status of patients (Hustoft et al., 2019). Rezapoor et al (2017), in his research, there was an increase in the quality of life of patients from all physical, mental, and social dimensions as an effect of implementing interprofessional collaboration in the hospital. Another benefit that comes from interprofessional collaboration is improved patient care (Wietholter et al., 2017). The application of interprofessional collaboration can also improve communication between health professionals through SBAR communication and integrated patient progress recording so that the function of team collaboration is to be able to provide continuous service and after rehabilitation treatment can increase the Activity Daily Living (ADL) score. (Lestari, Saleh and Pasinringi, (2017);Hustoft et al., 2019).

After the researcher selects and extracts the data for each article obtained, a detailed description of the name of the researcher, title, research design, respondent characteristics, research strengths and results, and research limitations are summarized in Table 1.

DISCUSSION

Several studies have been conducted to find out the benefits of interprofessional collaboration in health services, a total of 11 studies reviewed said that interprofessional education helps improve collaboration between care professional professionals compared to a single profession in providing services. One of the benefits of interprofessional collaboration is preventing medication errors. Irajpour et al. (2019), in their research with a quasi-experimental study method (single group, before and after) in 2017. The study was conducted in the ICU room of a teaching hospital collaboration with the Isfahan University of Medical Sciences located in Central Iran with a total of 23 beds. Participants include 50 members of the health care team (doctors, nurses, and clinical pharmacists) with at least 1 year of work experience in the ICU. Participants were selected using the census sampling method. Data were collected using a self-made two-part questionnaire. Data were analyzed using descriptive, statistical analytic, and version 16 of the SPSS software (P <0.05). The results showed that the incidence of medication errors was significantly lower after the implementation of interprofessional collaboration (P <0.001) between doctors, nurses, and clinical pharmacists. It is consistent with research Öztekin and Yüksel, 2013, that interprofessional collaboration increases the safety of treatment. Working in a multidisciplinary manner allows the reduction of drug-related problems. Köberlein-Neu et al. (2016) interprofessional collaboration is very much needed in supporting the care and healing needs of patients in the hospital, besides that interprofessional collaboration also functions to improve patient safety more accurately, by joining all health professions can keep patient safety rates increasing.

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Table 1. Study of the Effects of Implementing Interprofessional Collaboration on Patients

| Author                | Aim                                                                 | Design                                      | Sample          | Result                                                                 |
|-----------------------|----------------------------------------------------------------------|---------------------------------------------|-----------------|------------------------------------------------------------------------|
| Irajpour et al., 2019 | The purpose of this study was to determine the effect of interprofessional education programs on the safety of medication on medication errors by doctors and nurses in the ICU. | Quasi-experimental method (single group, before and after the implementation of interprofessional education programs). | 50              | The results of the study after 1 month of inter-professional education for doctors, nurses, and clinical pharmacists showed that the safety error of drugs was much lower than that before the implementation (P <0.001). |
| Hustoft et al., 2019  | The purpose of this study was to analyze how changes in patient-rated health and disability from baseline to after rehabilitation were related to communication and collaboration in the rehabilitation team and continuity of services. | Cohort                                      | 701 patients    | The results of the study revealed that a good rehabilitation program, including team, personal and interdisciplinary team rehabilitation care would have a better patient health impact after 1 year of follow-up. |
| Rezapproor et al., 2017 | The purpose of this study was to determine the effect of interprofessional collaborative implementation on the quality of life of patients after coronary angioplasty. | Randomized controlled clinical trial         | 50 samples      | The results of the independent t-test showed a significant difference between the two groups regarding the mean changes in quality of life scores and their dimensions in patients who underwent coronary angioplasty 3 months after the intervention (P <0.001). |
| Asakawa et al., 2017  | The purpose of this study was to investigate how to build interdisciplinary collaboration in multidisciplinary teams. | A qualitative analysis; Semi-structured interviews | Total of 26 participants | The results showed that there were three categories needed in building interprofessional collaboration: meetings, good communication and effective leadership. |
| Lestari et al., 2017  | The purpose of this study was to analyze the relationship of interprofessional collaboration towards the implementation of integrated patient development records of patient progress in the patient rooms of Prof. Dr. H.M. Anwar Makkatutu Local Public Hospital in Bantaeng. | Quantitative analysis with cross sectional study approach | 81 people with various professions | There was a good relationship between interprofessional collaboration with the integrated implementation of patient development records. |
| Brown et al., 2018    | The purpose of this study was to to describe the stages of development, documentation, and outcomes of educational programs to teach the elderly the principles of interprofessional collaborative care in the context of fall prevention. | Mixed method; one-group pretest and post-test experimental design | 12 different professions | There were no effective methods for teaching fall prevention and interprofessional collaborative practices. This interprofessional educational model teaches about the competence of interprofessional cooperation in the prevention of falls and other geriatric syndromes. |
| Astuti et al., 2019   | The purpose of this study was to analyze the effect of implementing SBAR communication (Situation, Background, Assessment, Recommendation) in interprofessional collaboration between doctors and nurses on patient safety. | Quantitative analysis of the profession of doctors and nurses | 62 nurses, 10 pharmacists and 9 physicians | The results showed that the average value of specialist doctors before the intervention was in the low category, while nurses were in the high effectiveness interpersonal communication category. |
| Wietholter et al., 2017 | The purpose of this study was to observe nurses, doctors, and pharmacists who carried out interprofessional practice in completing simulations in the Nurses’ interprofessional socialization, assessment round and valuing scale. | Practicing nurses who completed the pre-ISVS survey prior to a centered simulation | Experience-based interprofessional collaboration changed nurses’ perceptions of interprofessional care and the role of each discipline for the improvement of patient care. |
patient care (Wietholter et al., 2017). Improved communication between health professionals through SBAR communication in integrated patient progress recording is another benefit of implementing interprofessional collaboration so as to create sustainable patient care and increase ADL scores. Rokhmah and Anggorowat (2017) in his literature review says, that professionals working together in an interprofessional team determine good service quality. The interprofessional communication used is SBAR (Situation-Background Assessment-Recommendation). From the literature search results Rokhmah and Anggorowati (2017), that good service quality depends on professionals working together in an interprofessional team.

According to research Köberlein-Neu et al., 2016, interprofessional collaboration can increase the safety of the treatment. By working in a multidisciplinary team, you can reduce problems related to the provision of services by several professions. This interprofessional collaboration can also improve the ability of functional status in meeting daily needs or Activity Daily Living (ADL) in rehabilitation patients. Rezapoor et al. (2017); Karina (2019) said that the intervention group with patient care using the interdisciplinary team model had a better quality of life scores in all physical, mental, and social dimensions than the control group. Analyze that build good collaboration between professions are determined by three things: regular meetings, effective communication between professions, and support from leaders. Regular meetings and good communication and effective leadership can promote good collaboration practices and will increase patient satisfaction. Lestari, Saleh and Pasinringi (2017) said that the implementation of interprofessional communication can be seen in the Integrated Patient Development Record. In his research, the results showed that documentary evidence had been well written on the CPPT. CPPT documentation will be carried out optimally if it is equipped with adequate infrastructure, the right motivation, and is transparent, sustainable

Advanced Table 1

| Author                | Aim                                                                 | Design          | Sample                                      | Result                                                                 |
|-----------------------|----------------------------------------------------------------------|-----------------|---------------------------------------------|------------------------------------------------------------------------|
| Hustoft et al., 2018  | The purpose of this study was to measure Relational Coordination (RC) scores in an interprofessional team at seven rehabilitation centers in West Norway, to assess patient-reported benefits and continuity of rehabilitation care, and to know the relationship between the RC score and the patient's perceived benefits and ongoing care. | Prospective cohort study | Data from two surveys of patients at seven somatic rehabilitation centers in West Norway. | Continuous improvement of care services and improvement in ADL scores were associated with working as a team. |
| Susilaningsih, 2016   | The purpose of this study was to introduce the interprofessional health service collaboration models, model components, and processes to be implemented in the inpatient room setting. | A mixed method    | Stakeholders in hospitals                   | The average score of collective culture greater than average score of expert culture in two components of model namely integrated care pathway and team based patient care. In the other two components, integrated patient care documentation and interdisciplinary case conference the average score of expert culture greater than average score of collective culture, this is as important notes for the next preparation in implementation plan. |
| Hustoft et al., 2019  | The purpose of this study was to determine changes in the patient's health status and disability, which were assessed from the start to after rehabilitation and to know the relationship within the rehabilitation team and the continuity of care for patients. | Linear models    | 701 patients                               | After 1 year of follow-up treatment by the rehabilitation care team, there were better results for the patient's health. |
as well as a continuous monitoring and evaluation and feedback system, as well as the role of a case manager who can facilitate and become a collaborator for all health professionals. The application of this interprofessional collaboration also has a geriatric preventative effect on patients and improves the functional status of patients who have limitations (Brown et al., 2018).

Brown et al. (2018) said that the implementation of interprofessional inter-collaboration in the field is still difficult but his research illustrates that in the clinical flow model of patient management and patient management as a team, the mean of collective culture scores is greater than the average score of individuals, this means that practitioners tend to work cohesively by emphasizing the importance of sharing large expertise so that to build effective teamwork on interprofessional collaboration in these two components. Low et al (2017), efforts to increase collaboration between professionals can also be virtually multidisciplinary and proven to reduce re-hospitalization budgets. Xia, Wu and Cheng (2016) say to achieve a collaborative level of clinical practice and provide more considerate healthcare to patients. Need to introduce a multidisciplinary team approach to health care professionals will improve their performance in clinical practice and meet the demands for high-quality health care required interprofessional education, practice, and team building that facilitate health care providers. Bauw (2019) said socialization and assistance to health professionals in the implementation of interprofessional collaboration is needed.

The question that arises is how do we improve the application of the interprofessional collaboration model given the many benefits that can be obtained to create professional services. This question can be the basis for further research to explore deeper the obstacles faced in the field in the application of interprofessional collaboration.

CONCLUSION

A literature review on this study found that the application of interprofessional collaboration affects patient safety, patient quality of life reduces the risk of falls, prevents medication errors, improves the quality of life, and improves patient functional status. With interprofessional collaboration, it can also improve communication between health workers through SBAR communication and integrated patient progress notes as evidence of effective communication between professions regarding the status of patient development in realizing collaboration between professions. Effective communication in providing services to patients will improve patient safety. However, implementation in the field did not match expectations.

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REFERENCE

Asakawa, T. et al. (2017) ‘Establishing Community-Based Integrated Care for Elderly Patients through Interprofessional Teamwork: A Qualitative Analysis’, Journal of Multidisciplinary Healthcare, 10, pp. 399–407.

Astuti, A. M. Suza, D. E and Nasution, M. L (2019) ‘Analisis Implementasi Komunikasi SBAR Dalam Analysis of Implementation of Sbar Communication in Doctor and Nursing Interprofessional Patients to Patient Safety Abstract Pendahuluan’, Jurnal Ilmiah Permas: Jurnal Ilmiah STIKES Kendal, 9(4), pp. 359–366.

Bauw, J. F. (2019) ‘Sosialisasi Model Praktik Kolaborasi Interprofesional Pelayanan Kesehatan Di Rumah Sakit’, 6(1), pp. 10–13.

Brown, D. K. et al. (2018) ‘Interprofessional Education Model for Geriatric Falls Risk Assessment and Prevention’, BMJ Open Quality, 7(4), pp.1-9.

Hustoft, M. et al. (2018) ‘Relational Coordination in Interprofessional Teams and its Effect on Patient-Reported Benefit and continuity of care: A prospective Cohort Study from Rehabilitation Centres in Western Norway 11 Medical and Health Sciences 1117 Public Health and Health Ser’, BMC Health Services Research, 18(1), pp. 1–9.

Hustoft, M. et al. (2019) ‘The effect of Team Collaboration and Continuity of care on Health and Disability among Rehabilitation Patients: A Longitudinal Survey-based Study from Western Norway’, Quality of Life Research, 28(10), pp. 2773–2785.
Irajpour, A. et al. (2019) ‘Effect of Interprofessional Education of Medication Safety Program on the Medication Error of Physicians and Nurses in the Intensive Care Units’, *Journal of Education and Health Promotion*, 8, pp 196.

Karina, I. (2019) ‘Meningkatkan Kinerja Interprofesional Kolaborasi Terhadap Keselamatan Pasien’. Preprint: INA-Rxiv

Köberlein-Neu, J. et al. (2016) ‘Interprofessional Medication Management in Patients with Multiple Morbidities - A Cluster-Randomized Trial (the WestGem study)’, *Deutsches Arzteblatt International*, 113(44), pp. 731–740.

Lestari, Y., Saleh, A. and Pasinringi, S. A. (2017) ‘Hubungan Interprofesional Kolaborasi Dengan Pelaksanaan Catatan Perkembangan Terintegrai Di RSUD Prof.Dr.H.M.Anwar Makkatutu Kabupaten Bantaeng’, *JST Kesehatan*, 7(1), pp. 85–90.

Low, L. L. et al. (2017) ‘Applying the Integrated Practice Unit Concept to a Modified Virtual Ward Model of Care for Patients at Highest Risk of Readmission: A randomized Controlled Trial’, *PLoS ONE*, 12(1), pp. 1–18.

Öztekin, S. D. and Yüksel, S. (2013) ‘Initial Nursing Management of Patient with Severe Traumatic Brain Injury’, *Journal of Neurological Sciences*, 30(2), pp. 461–468.

Rezapoor, P. et al. (2017) ‘Effects of Collaboration Care Model on the Quality of Life in Patients after Coronary Angioplasty: A Randomized Controlled Clinical Trial’, *International Journal of Community Based Nursing and Midwifery*, 5(2), pp. 112–122.

Rokhmah, N. A. and Anggorowati, A. (2017) ‘Komunikasi Efektif Dalam Praktek Kolaborasi Interprofesi Sebagai Upaya Meningkatkan Kualitas Pelayanan’, *Journal of Health Studies*, 1(2), pp. 65–71.

Susilaningsih, F. S. (2016) ‘Sosialisasi Model Praktik Kolaborasi Interprofesional Pelayanan Kesehatan Rumah Sakit’, *Dharmakarya: Jurnal Aplikasi Ipteks untuk Masyarakat*, 6(1), pp. 10-13.

Wietholter, J. P. et al. (2017) ‘Interprofessional Collaborative Practice through an adult Medicine Based Simulation’, *Journal of Interprofessional Education and Practice*, 9, pp. 21–26.

Xia, L., Wu, H. and Cheng, Y. (2016) ‘Interprofessional Collaboration Strategies: A hematology Unit Case Study’, *Journal of Nursing Education and Practice*, 7(4), pp. 51–54.