



Addie Model-Based Learning to Improve Competences of Clinical Nurse Leaders

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ABSTRACT

Introduction: Clinical nurse leaders (CNL) play a significant role in improving the quality of nursing services. Such a role includes satisfying clients during the care process by referring to the nursing goal. In meeting the standard, CNL should enhance their knowledge, attitude, and soft and hard skills. **Purpose:** Identifying the competences of CNL through ADDIE model-based learning. **Method:** The present study relied on a pre-experimental design with a one-group pre-test and post-test. This study used quantitative research with the pre experiment method, and pre and post test. As many as 20 clinical nurse leaders from inpatient units of accredited public and private hospitals in Singkawang were involved as the sample. Further, the data analysis in this study used Paired T test. The result of this study found a meaningful improvement of competences among CNL through ADDIE model-based learning ($p=.006$). **Recommendation:** ADDIE model-based learning attempts to enhance the competences of CNL. This research recommends the addition of the ADDIE model to advance the competence as the clinical nurse leaders. Moreover, this strategy can be applied to develop CNL's ability in other managerial fields.

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INTRODUCTION

Nurses with competences should essentially carry out quality nursing care. Nurses' practice competence standards comprise knowledge, attitude, and behavior (Iradukunda & Mayers, 2020). Creating a figure of a nurse with such competences requires excellent nursing leadership and service management. This is in accordance with five domains of ASEAN Nursing Common Core Competences, namely leadership and service management (Ministry of Health, 2020).

Competences of nursing leadership and service management focus on the role of CNL who are competent to provide nursing service. The role aims to create a healthy work environment, patients' satisfaction in line with

nursing goals, and organizational visions (Larkin-perkins, 2020). For this reason, the government regulates competences through nurse profession standards in terms of duties, roles, and functions (Kemenkes, 2020). In fulfilling practice standards, CNL should be able to better their knowledge, attitude, and both soft and hard skills during the process of patient-focused care (Gunawan et al., 2019; Provost et al., 2013). Besides, they should be trained through a competence-based method.

Competence-based training helps CNL recognize practice standards in the area of service management corresponding to patients' needs. The training is designed following practice standards and preparing CNL to perform a professional nursing care management duty (Goniewicz et al., 2021). Competence-based training should be adjusted to

practice standards, consisting of needs assessment, evidence-based content development design, activity implementation, and effect evaluation (Danielle Levac, Stephanie M.N. Glegg, Chantal Camden, Lisa M. Rivard, 2015). This training method is developed with the analysis, design, development, implementation, and evaluation (ADDIE) process.

Training with the ADDIE model facilitates the learning process of CNL in achieving the taught competences. This kind of training outplays others as it analyzes the needs for arranging plans and competences, and develops problem-solving learning methods (Rahmat, 2014). The present study is designed to understand CNL's insights regarding role, knowledge, and experience in providing care by employing an effective competence-based training strategy. The purpose of this study was to examine CNL's competences with ADDIE model-based learning approach in accredited hospitals.

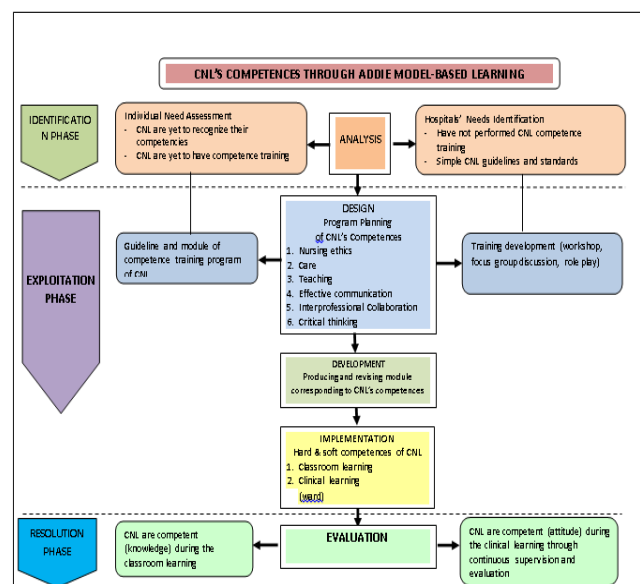
METHOD OF STUDY

A pre-experimental approach with a one-group pre-test and post-test design with control was used in this research. This study intended to test the effect of the ADDIE model-based learning approach on improving the competences of CNL. It was conducted at dr. Abdul Aziz and St Vinsensius hospitals from May to November 2020; these hospitals were selected because they are accredited by the Indonesian Commission of Hospital Accreditation (hereinafter, KARS) that applies service standards of CNL. The sample was CNL in two hospitals, with 20 respondents were selected as the target sample. Two instruments were utilized: investigating respondents' knowledge and observing CNL's competences with the inclusion criterion of agreeing to participate in the program.

Competence-based training program with ADDIE implementation was divided into three stages, as follows: (1) Identification includes analysis (A) phase, in which the researchers performed need assessment of CNL and hospitals. (2) Exploitation covers design (D) phase: this program arranged a module of CNL's competences, namely nursing ethics, care, preceptorship and mentorship, effective communication, interprofessional collaboration, critical thinking and leadership, designed learning scenario, initially

planned learning media (workshop, focus group discussion, and role-play) following CNL's competences. The development (D) process undertook the production and revision of the guideline and module of CNL's competences. The final stage was implementation (I) of the hard and soft competences of CNL during the classroom and clinical (ward) learning. Next, the resolution stage or evaluation (E) was done through supervision and evaluation to identify knowledgeably competent CNL.

Data processing was carried out before and after the competence-based training. Nursing experts of Universitas Indonesia had performed validity tests towards knowledge and observation instruments. Univariate data analysis was to describe nurses' characteristics; meanwhile, bivariate analysis was done to assess the knowledge and skills of CNL by using the paired t-test. The present study had been approved by the ethics committee of Pontianak Health Polytechnic, Ministry of Health number 117/KEPK-PK.PKP/V/2020 and dr. Abdul Aziz hospital number 17/KEPK/2020.



Scheme 1. Research Framework

RESULTS AND DISCUSSION

The results present the knowledge and skills of CNL during the competence-based training with ADDIE model approach. Table 1 Characteristics of CNL Accredited Hospitals in Singkawang City of 2020 (n = 20)

| Categories | Total | Percentage (%) |
|---------------------------------|-------|----------------|
| Sex | | |
| a. Male | 3 | 15 |
| b. Female | 17 | 85 |
| Sum | 20 | 100 |
| Education | | |
| a. Nurse | 10 | 50 |
| b. Bachelor's Degree in Nursing | 2 | 10 |
| c. Associate Degree in Nursing | 8 | 40 |
| Sum | 20 | 100 |
| Employment Status | | |
| a. Permanent employees | 20 | 100 |
| b. Contract employees | 0 | 0 |
| Sum | 20 | 100 |

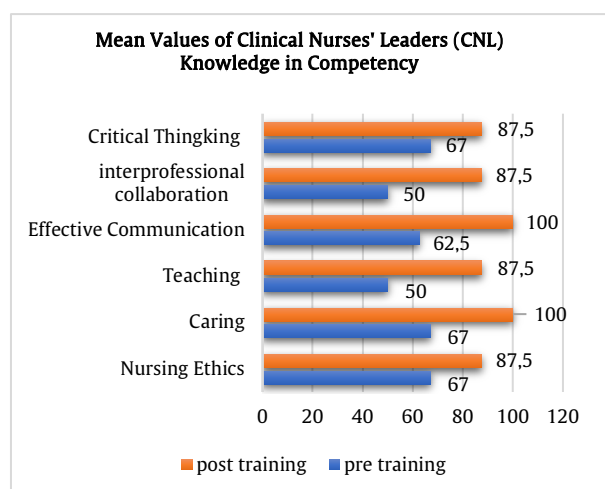
The above table illustrates that the majority of respondents are females (17 people or 85%). In terms of educational background, most of them are a nurse (ten people or 50%), followed by Bachelor of Nursing (two people

or 10%), and associate degree of nursing (eight people or 40%). Additionally, all respondents (100%) are permanent employees.

Table 2. Knowledge of CNL before and after strengthening
One-day knowledge strengthening of CNL with ADDIE training method was carried out by giving them a pre- and post-test of knowledge, i.e., 20 multiple-choice questions.

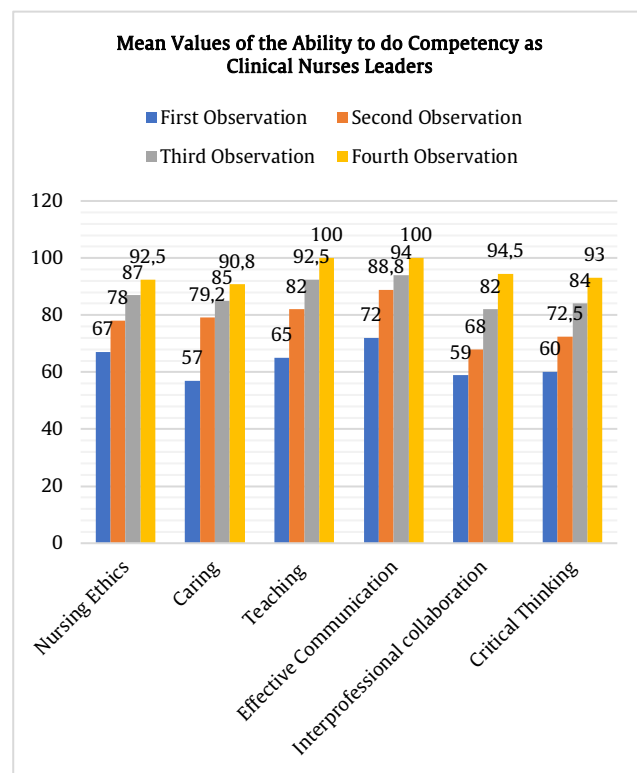
| Knowledge of CNL | Mean | Mean Differences | SD | CI 95% | p |
|-------------------------------|-------|------------------|------|---------------|-------|
| Prior knowledge | 60.58 | 31.08 | 8.38 | 51.78 - 69.37 | 0.000 |
| Knowledge after strengthening | 91.66 | | 6.45 | 84.89-98.44 | |

The mean of CNL's knowledge after the training program measures at 91.66, higher than before the program. Further analysis shows a significant improvement (P=0.000) of knowledge after the training (91.66).



Graph 1 The mean of CNL's knowledge in competences

Knowledge enhancement is found in all CNL's competences after the strengthening training program. CNL's knowledge regarding the competence of effective communication before the training is 62.5, and it increases to 100 after the program.



Graph 2 The mean of the implementation of competences as CNL

Graph 2 presents the mean of the ability in implementing competences as CNL. It increases in all competences with four observations.

Table 3 CNL's Competences Before and After ADDIE Training in 2020 (n=20)

| Competences | Mean Differences | SD | P |
|---------------------------------|------------------|-------|-------|
| Nursing Ethics | 81.12 | 11.15 | 0.006 |
| Care | 78 | 14.7 | |
| Teaching | 84.87 | 15.16 | |
| Effective Communication | 88.7 | 12.03 | |
| Interprofessional Collaboration | 75.87 | 15.61 | |
| Critical Thinking | 77.37 | 14.3 | |

The mean of CNL's competences is increased, with the highest one is effective communication (88.7). In short, there is a significant increase in CNL's competences with P = 0.006

DISCUSSION

1. ADDIE Model-based Learning

ADDIE model-based learning is recommended to better technical competences (hard competences) and managerial competences (soft competences) in nursing services (Danielle Levac, Stephanie M.N. Glegg, Chantal Camden, Lisa M. Rivard, 2015). The first stage of ADDIE model-based

learning is analysis to discover knowledge levels, skills, and critical thinking. The next stage is design by planning learning modules and technical guidelines concerning policies, roles, and technical skills adjusted to competences. Additionally, the development stage is during the program by revising concepts, and abilities corresponding to learning objectives. In the implementation stage, CNL's knowledge and skills are observed and supervised continually in the clinical setting. The last stage is formative and summative evaluations. The formative evaluation is about CNL's ability; the summative one is done at the end of the activity in order to give feedback during the learning process (Cahyadi, 2019; Deane & Fain, 2016; Goniewicz et al., 2021).

2. An overview of CNL's competences

An overview of CNL's knowledge before and after competence-based training to determine knowledge, skills, and competences is required to prepare nurses to perform nursing duties (Goniewicz et al., 2021; Suhariyanto et al., 2018). A competence-based training program serves as an effort to improve innovation and creativity (Abouzaj, 2019). Decision-makers should supervise accountabilities towards nurse training on local and national scales (Djojo et al., 2020; Misztal-Okońska et al., 2020).

a. Nursing Ethics

CNL are able to provide instructions of nursing principles of ethics and code of conduct to clinical nurses to protect clients' rights, life quality improvement, give care to clients with a high risk, informed consent, and palliative care mentorship (Musa et al., 2011). On top of that, CNL need to redefine nursing values to facilitate the transition in nurse shift (new nurses) into a new organizational environment. CNL can also undergo managerial functions of instructions and controlling by doing monitoring and evaluation, evaluating ethical dilemma, and making ethical decision. Next, the solution to ethical dilemma and issue is conveyed to executive nurses and nursing directorate. (Makaroff et al., 2014; Storch et al., 2013).

b. Care

Care implementation given to CNL is part of learning and experience to better the care for nursing staff through training, self-reflection, and having a discussion with fellow CNL based on the module in connection with what and why the daily activities carried out in wards (Ackerman, 2019).

Eight caring behaviors that are crucial between CNL and nurses consist of problem-solving, paying attention to new things, mutual respect, fun working process, appreciating success, facilitating work environment, as well as basic needs and work fulfillment (Duffy, J. R 2013).

c. Teaching

CNL have a leadership competence during the teaching process towards executive nurses or nursing staff by providing guidelines related to evidence-based nursing amid the nursing care and introducing changes for new insights under a policy, guideline, or technical standard (Reid & Dennison, 2011). Effective teaching transfers knowledge through peers; peers give learning opportunities and enhance peer-to-peer skills. Moreover, CNL do mentorship to observe the progress during the pedagogical learning process (Rosenau et al., 2015).

d. Effective Communication

CNL implement managerial functions, i.e., planning, organizing, staff arrangement, instruction, and controlling that involve nursing staff with an effective communication technique. Good communication between CNL and nursing staff influences conflict resolution and leads nurses to follow the goals of care, to cooperate with other professions in integrated care, and to solve problems with leaders. Several strategies to improve effective communication are role-play, case scenario, self-reflection, and experience adjusted to nurses' culture and background (Crosby & Shields, 2010; Schwarzkopf et al., 2012).

e. Interprofessional Collaboration

The findings reveal that CNL have a role in performing interprofessional collaboration with the other team (doctors, midwives, pharmacists, nutritionists, other health workers and parties) as a form of integrated care. Playing role well will lead to care goal achievement, reducing complication, target-fit care day, preventing service risk, along with financing effectiveness (Fletcher et al., 2016). A focus group discussion program in client's case is able to promote interprofessional collaboration. The program enables professionals to elaborate on the development of client's clinical overview, share solutions, compare an intervention program and discussion for the agreement on subsequent care decisions. Medical Doctor in Charge (MDiC) as the clinical leader during FGD is facilitated by CNL (McCaffrey et al., 2010).

f. Critical Thinking

CNL have the competence to make clinical decisions throughout the process of nursing care together with the team. Critical thinking skill aims to prevent fatal failure (have clinical improvement). Some programs to be applied by CNL in thinking critically include case study and simulation of client handling in order to expose the nurses regarding the clinical decline and recovering effort. In the ward, the nurse is brought into a condition to provide care with sound preparation to clients having a high risk. The nursing director should also take into account the program of the development of education and competency test as in accordance with the realm of clinical nursing after the nurse gets supervised and mentored by CNL (Schubert, 2012). The next learning program for CNL is critical thinking course with clinical reasoning, covering cognitive strategy and clinical simulation, identifying possible nursing diagnosis from the problem analysis and the utilization of the latest nursing intervention (Cruz & Pimenta, 2009).

CONCLUSION AND RECOMMENDATION

Conclusion

The present work concludes that the ADDIE model-based learning can significantly better CNL's competences in the accredited hospitals. The effect of such learning is viewed from CNL's competences in terms of knowledge and skills that include nursing ethics, care, effective communication, teaching, interprofessional collaboration, and critical thinking. CNL can apply the competences in carrying out

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