

# Clinical achievement improvement through experiential learning-based training

Fitri Chandra Kuspita,<sup>1</sup> Tintin Sukartini,<sup>1</sup> Ahsan Ahsan,<sup>2</sup> Nursalam Nursalam,<sup>1</sup> Apriyani Puji Hastuti<sup>3</sup>

<sup>1</sup>Faculty of Nursing, Universitas Airlangga, Surabaya; <sup>2</sup>Faculty of Health Science, Universitas Brawijaya, Malang;

<sup>3</sup>Department of Nursing, Faculty of Health Science, Institut Teknologi Sains dan Kesehatan RS dr Soepraoen, Malang, Indonesia

## Abstract

This study aimed to enhance clinical educators' competence through experiential learning-based preceptorship training. Many clinical educators struggle with implementing effective clinical education, providing guidance, and having limited time for new nurses. The research employed a quasi-experimental design with a pre-posttest control group involving 60 clinical educators. The intervention group received a five-day training module using experiential learning-based preceptorship, while the control group received standard intervention. Data analysis used the Wilcoxon

Signed Rank Test to analyse differences before and after intervention, and used Mann-Whitney to analyse differences between the two groups. Analysis revealed significant improvements in critical thinking, patient safety, leadership, communication, research-based practice, and professional development among the intervention group compared to the control group ( $p=0.000$ ). The findings highlight the effectiveness of this training model in enhancing clinical educators' learning outcomes. The study suggests that incorporating experiential learning into clinical education can be a valuable strategy for improving the competence of clinical educators and subsequently achieving better clinical achievements.

Correspondence: Tintin Sukartini, Faculty of Nursing, Universitas Airlangga, Surabaya, East Java, Indonesia.  
E-mail: tintin-s@fkip.unair.ac.id

Key words: clinical education, experiential-learning, learning outcome, nursing, preceptorship.

Contributions: FC, conceptualization, data curation, formal analysis, methodology, validation, visualisation, writing – original draft, review and editing; TS, AA, NN conceptualization, investigation, methodology, validation, conceptualization, formal analysis, validation, and analysis; AP, writing – original draft, review & editing.

Funding: none.

Conflict of interest: the authors declare no potential conflict of interest.

Ethics approval and consent to participate: this research was approved by ethical permission from the Health Research Ethics Commission (KEPK) Faculty of Nursing, Universitas Airlangga number 2540- KEPK dated June 20 2022.

Patient consent for publication: written informed consent was obtained for anonymised patient information to be published in this article.

Availability of data and materials: all data generated or analysed during this study are included in this published article.

Received: 5 November 2023.

Accepted: 19 December 2023.

Early access: 26 January 2024.

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Licensee PAGEPress, Italy  
Healthcare in Low-resource Settings 2024; 12:12052  
doi:10.4081/hls.2024.12052

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## Introduction

Learning outcomes for clinical educators are designed to ensure the competence of new nurses can be attained. However, many clinical educators still lack an understanding of how to effectively implement clinical education practices<sup>1</sup> Additional identified problems include clinical educators struggling with providing guidance, having limited time to meet new nurses, and a lack of evaluation to measure the performance of new nurses.<sup>2</sup>

The concept of learning theory highlights components that need further exploration, including the characteristics of new nurses, clinical educators, and learning media facilities. This is in addition to assessing the learning achievements of clinical educators themselves.<sup>3-5</sup> Factors contributing to enhanced competence among clinical educators involve improvements in their quality as role models.<sup>6-8</sup> The qualities of clinical educators as role models encompass being caring, engaging in positive interactions, showing empathy, earning respect from colleagues, possessing reliable communication skills, and fulfilling a strong advocacy function. Meanwhile, the qualities of a clinical educator as a role model include being an expert practitioner, an enthusiastic resource person, a knowledge sharer, a respecter of human dignity, a critical thinker, and an honest and accountable individual.<sup>9,10</sup> Enhanced learning outcomes for clinical educators, in terms of quality, will improve critical thinking, patient safety, leadership, communication, research-based practice, and professional development.<sup>2,3</sup>

The Experimental Learning Theory (ELT) is a combination of understanding and transforming experiences that can assist clinical educators in guiding new nurses to enhance their clinical competence in attitudes, knowledge, and skills. To operationalise an appropriate learning system for forming competent clinical educators, the experiential learning system is proposed.<sup>11-15</sup> The stages in Experiential Learning consist of Concrete Experience (CE), Reflective Observation (RO), Abstract Conceptualization (AC), and Active Experimentation (AE). These four phases of Experiential Learning cannot be applied with just one method; there needs to be a combination of learning theory and andragogy

theory. The combined focus of these two theories is on adult learning, particularly in the context of new nurses (nursing center learning). Andragogy learning theory includes self-concept and motivation to learn, experience, readiness to learn, and orientation to learn.<sup>9,16,17</sup>

The concept of learning theory highlights components that need further exploration, including the characteristics of new nurses, clinical educators, and learning media facilities, in addition to the learning achievements of clinical educators themselves.<sup>10,18-21</sup> The aim of this study was to analyse clinical education training based on experiential learning to improve clinical achievement.

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## Materials and Methods

The research conducted in three hospitals that have achieved Plenary Accreditation for Hospital Accreditation Standards issued by the Ministry of Health (STARKES), aimed to investigate the impact of implementing a clinical nursing education model based on experiential learning using a preceptorship method. Employing a robust quasi-experimental design with a pre-posttest control group approach, the study provided a comprehensive framework for assessing the learning outcomes of clinical educators.

The study involved a total of 338 clinical educators within the selected hospitals. After rigorous application of inclusion criteria, 200 clinical educators were deemed eligible for participation, while 138 were excluded based on predefined research criteria. The purposive sampling method ensured a deliberate selection of qualified participants, resulting in a final cohort of 60 clinical nurse educators evenly distributed between the control and experimental groups. To ensure the study's relevance and representativeness, the target population consisted of clinical educators from various hospitals in East Java, Indonesia. Strict inclusion criteria for this population included nurses working in hospitals, possessing a minimum of five years of experience with permanent employee status, holding a Bachelor's Degree in Nursing, and being certified preceptors. Exclusion criteria were meticulously established to maintain the study's integrity, excluding nurses on maternity leave, those undergoing training, and those on permission or study assignments.

The independent variable in this research was the implementation of clinical nursing education using a preceptorship method based on experiential learning, while the dependent variable was the learning outcomes of clinical educators, measured through critical thinking, patient safety, leadership, communication, research-based practice, and professional development. The implementation of clinical nursing education using a preceptorship method based on experiential learning was aimed at increasing the learning outcomes of clinical educators, supported through clinical educators with module training and its subsequent implementation directly with new nurses. The influence of developing a clinical education model with a preceptorship method based on experiential learning to increase the learning outcomes of clinical educators for new nurses was a key focus. The research instrument used a questionnaire developed by the researcher. The intervention group received training in clinical nursing education modules using a preceptorship method based on experiential learning for five days, while the control group received standard intervention.

Data analysis employed the Wilcoxon Signed Rank Test for pretest and posttest comparisons and the Mann-Whitney test for assessing differences between the control and intervention groups with a significance level of 5%. The research findings, summarised

in the analysis table, provide a detailed overview of the outcomes observed in both groups. Both groups were measured for learning outcomes before and after intervention using the questionnaire.

Ethical considerations were paramount throughout the research process. The study received ethical approval from the Health Research Ethics Commission (KEPK) at the Faculty of Nursing, Universitas Airlangga, under protocol number 2540-KEPK, dated June 20, 2022, ensuring that the research adhered to the highest standards of ethical conduct. All participants approved and signed the informed consent after receiving an explanation of the study and the potential risks involved, along with an understanding that their identities would be kept confidential for the purpose of publishing the study results.

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## Results

Table 1 shows that the highest proportion of ages in both groups is 45-49 years (50% and 57%, respectively). The largest proportion of respondents in both the intervention group and the control group were female (50% and 57%). Regarding religious characteristics, all respondents in both the control group and the intervention group belonged to the Islamic religion (100%). In terms of ethnic characteristics, in the intervention group, 100% of respondents had this characteristic, while in the control group, 50% were from the Javanese tribe, and 50% were from the Madurese tribe. Concerning work experience, most of them had 11-20 years of work experience in the intervention (50%) and in the control group (53%). Regarding structural position characteristics, 67% of the respondents in the intervention group held the position of Team Heads, while in the control group, most of them, there is 50%, held the position of Team Leaders. Regarding experience as a clinical educator, both groups have more than 5 years of experience (73% for the intervention and 67% for the control group).

Table 2 reveals a notable impact or disparity between the intervention and control groups resulting from the implementation of clinical education module training utilising the experiential learning-based preceptorship method. This initiative aimed to enhance the learning outcomes of clinical educators for new nurses in the intervention group, as indicated by the results of both pre-test and post-test assessments. Furthermore, the Mann-Whitney test results for other variables in this study demonstrated significant differences between the intervention and control groups, encompassing critical thinking ( $p=0.000$ ), patient safety ( $p=0.000$ ), leadership ( $p=0.000$ ), communication ( $p=0.000$ ), research-based practice ( $p=0.000$ ), and professional development ( $p=0.000$ ).

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## Discussion

The conducted study revealed findings explaining that indicators such as critical thinking, patient safety, leadership, communication, research-based practice, and professional development strongly influenced the increased learning outcomes of clinical nursing educators using experiential learning-based preceptorship methods. The research also demonstrated significant differences in the competency of clinical educators in clinical nursing education, particularly when employing the experiential learning-based preceptorship method to enhance their learning outcomes. The research-based practice factors within the infrastructure and human resources category were found to be in the deficient cate-

gory. Additionally, based on the description of the characteristics of professional development in the implementation category, the final results were still categorised as poor.

Changes and advancements in the nursing clinical education process exert an influence on the demand for heightened sensitivity and selective service quality segmentation. This segmentation is based on the value of diversity among individuals, patients, and clinical educators.<sup>22-24</sup> Therefore, there is a need to enhance the professional competence of clinical educators, facilitating improved services through the adaptation of experiential values, competence, and procedures. This adaptation occurs through the interactive engagement of clinical educators in the learning process of clinical nursing education. This perspective aligns with the notion that individuals continuously develop knowledge across cognitive, affective, and psychomotor factors.<sup>25,26</sup>

The role of clinical educators extends beyond being merely teachers who introduce knowledge; it encompasses being guides, developers, and managers of learning activities. Clinical educators play a vital role in facilitating the learning activities of new nurses,

ensuring the achievement of set goals.<sup>26,27</sup> Characteristics of clinical educators that can influence the learning process, serving as indicators for selecting clinical educators in this research, include Teacher Formative Experience, Teacher Training Experience, and Teacher Properties.

Teacher Formative Experience pertains to educators' characteristics such as age, gender, religion, social and cultural background, and past experiences related to loss, grief, and bereavement. Teacher Training Experience includes activities and educational background/level of education, along with training experience related to palliative care proposed.<sup>15</sup> Teacher Properties encompass everything related to the characteristics possessed by clinical educators.<sup>28</sup> In this study, Teacher Properties will be assessed based on the professional abilities of clinical educators, interpersonal relationships with new nurses, and the personal qualities exhibited by clinical educators during the learning process.<sup>29</sup>

The perceived lack of role modelling by clinical educators reflects their low proficiency in indicators of professional ability and the development of interpersonal relationships.<sup>17</sup>

**Table 1.** Characteristic of respondents (N=60).

Variable	Category	Group			
		Intervention Group Frequency (f)	Intervention Group Percentage (%)	Control Group Frequency (f)	Control Group Percentage (%)
Age	30-34 years old	0	0	0	0
	35-39 years old	2	6	8	27
	40-44 years old	8	27	3	10
	45-49 years old	15	50	17	57
	50-54 years old	5	17	2	6
Gender	Man	15	50	13	43
	Woman	15	50	17	57
Religion	Islamic	30	100	30	100
	Christian	0			
Ethnic group	Javanese	30	100	15	50
	Maduranese	0	0	15	50
Length of work	5-10 years	5	17	4	13
	11-20 years	15	50	16	53
	21-30 years	5	17	6	20
	31-40 years	3	10	2	7
	41-50 years	2	6	2	7
Structural position	Head of nurse	10	33	10	33
	Primary nurse	20	67	15	50
	Associate nurse	0	0	5	17
Clinical educator experience	Under 5 years	8	27	10	33
	Above 5 years	22	73	20	67

**Table 2.** Impact of experiential learning-based preceptorship on clinical educator learning achievements in new nurses (N=60).

Variable	Intervention Group (n=30)				Control Group (n=30)			
	Pre-test Mean±SD	Post-test Mean±SD	ΔMean	p	Pre-test Mean±SD	Post-test Mean±SD	Δ Mean	p
Critical thinking	13.5±0.013	14.8±0.000	0.4	0.000	12.8±0.183	14.0±0.000	1.9	0.000
Patient safety	18.3±0.093	57.8±0.047	1.7	0.000	19.0±0.691	57.9±0.000	2.7	0.000
Leadership	12.8±0.007	39.9±0.000	0.3	0.000	12.4±0.40	39.0±0.000	1.6	0.000
Communication	11.4±0.151	35.0±0.000	0.0	0.000	11.6±0.28	35.0±0.000	2.0	0.000
Evidence based practice	12.5±0.589	40.0±0.000	0.2	0.000	13.1±0.036	39.0±0.000	1.7	0.000
Professional practice	12.8±0.013	39.8±0.000	0.5	0.000	12.8±0.024	39.0±0.000	1.7	0.000

Consequently, the quality of nurses may suffer, and from a scientific perspective, their skills and competencies might not meet the standards, risking the safety of patients during practical activities.<sup>15,22</sup> Moreover, the low ability of clinical educators in fulfilling mentoring functions for new nurses during the orientation period has led to a relatively high turnover rate of 16% among new nurses. This condition can induce discomfort in the learning process of clinical nursing education, resulting in a decline in the quality of clinical educators and the application of practical knowledge.<sup>16</sup> Improving the learning outcomes of clinical educators in terms of quality, including critical thinking, patient safety, leadership, communication, research-based practice, and professional development, is crucial.<sup>2</sup>

The Experiential Learning Theory (ELT), formulated by David Kolb, is a dynamic framework guiding clinical educators in shaping the clinical competence of new nurses. ELT posits that learning involves active engagement with experiences, reflection, conceptualisation, and practical application.<sup>10</sup> By orchestrating hands-on experiences and reflective discussions, clinical educators expose new nurses to a holistic learning environment, fostering not only technical skills but also critical thinking and professional attitudes.<sup>30,31</sup> The theory underscores the importance of tailoring teaching methods to individual learning styles, emphasising a cyclical process of concrete experiences, reflective observation, abstract conceptualisation, and active experimentation.<sup>31</sup> ELT thus provides a comprehensive foundation for optimising the development of new nurses, ensuring a personalised and effective educational experience within clinical settings.

## Conclusions

The implementation of training clinical nursing education using the experiential learning method has demonstrated its effectiveness in significantly enhancing the learning outcomes of clinical educators. By incorporating an ELT-based learning model, which integrates practical experiences with theoretical foundations in clinical nursing education, alongside the preceptorship method, this approach ensures a comprehensive development of clinical educators' learning outcomes. The training focuses on not only increasing knowledge and skills related to clinical nursing education but also fostering a positive attitude towards the preceptorship method. This multifaceted approach recognises the importance of not only imparting theoretical knowledge but also providing hands-on experiences that contribute to a more profound understanding of clinical education, ultimately shaping well-rounded and proficient clinical educators.

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