

Descriptive of Critical Thinking in Nursing Care of Nurses: A Survey Study

Diah Arruum¹, Dewi Elizadiani Suza^{2*}, Nur Asiah³, Nunung Febriany Sitepu⁴

^{1,2,3,4}Faculty Of Nursing, Universitas Sumatera Utara

Email corresponding: dewi1@usu.ac.id

ABSTRACT

Nurses are responsible for providing nursing care to patients while being treated in the hospital. Providing nursing care to patients requires critical thinking skills for nurses to be able to achieve various problem-solving and decision-making in care so that the needs and treatment process of patients can be met. Critical thinking in nursing care begins with the assessment to the evaluation of nursing care for patients. However, obstacles in critical thinking in nursing care are still a concern for nurses. This study aims to descriptive of critical thinking in nursing care of nurses. This study is a descriptive survey study with a cross-sectional design. This study involved 69 nurses. This study was conducted in September-December 2019 in Medan. The sample was selected using the purposive sampling method, and data were collected through a questionnaire developed by the researcher related to critical thinking in nursing care. The output of data analysis uses frequency distribution. The results obtained were that the age range of nurses was 20-30 years with female gender, educated as professional nurses, and the longest work period was 1-4 years; the majority of career levels were level I. The critical thinking ability of nurses in the capable category was 92.7%. The majority of nurses have good critical thinking knowledge in nursing care for patients. Nurses who have good nursing care reflect good competence and performance. Nursing managers need to motivate and monitor nurses continuously in nursing care to patients because critical thinking affects the caring behavior of nurses. Nurses who have good critical thinking can improve performance in providing nursing care.

Keywords: critical thinking, nursing care, patient, problem solving

INTRODUCTION

One of the most crucial nursing skills that nurses need to use in their workplace is critical thinking. In nursing, critical thinking can help nurses make decisions and provide better quality nursing care to patients (Christodoulakis et al., 2023). Applying critical thinking skills is a challenge for practical nurse and therefore innovative teaching methods are needed to enhance learning while successful implementation requires strategies to minimize errors and maintain something that is possible from the process (Patricia et al., 2022). One of the main dilemmas facing the practical nurse is the gap between theory and practice. That is, the lack of theory and practice in implementation is encountered when nurses make decisions for their patients. The gap that is often found in the application of critical thinking is that it does not develop significantly when they apply

their knowledge when they become nurses. Therefore, it can be concluded that nurses may not fully develop their skills in nursing, including critical thinking.

The ward culture or setting is one of the obstacles to critical thinking development. Studies have identified two types of barriers that inhibit nurses' ability to develop or utilize critical thinking effectively. Some barriers to implementing critical thinking arise in acute care settings. Examples include time constraints, constant interruptions, health care professionals with varying levels of skills and little organizational support for learning (Chinai et al., 2018). Another barrier to critical thinking is teaching critical thinking to pre-graduate or even postgraduate nurses (Orhan & Çeviker Ay, 2023). When a nurse attempts to use critical thinking in clinical practice, another obstacle appears. Therefore, practical nurse must be able to recognize and help nurses overcome barriers in implementing clinical practice. The barriers for nurses during implementing critical thinking in clinical practice are that nurses find it difficult to work as a team with other health professionals and provide patient-centered care (Sangaleti et al., 2017); and when nurses trying to use critical thinking in stressful situations (Polat et al., 2019).

Based on previous studies, there are many advantages in implementing critical thinking. Critical thinking applied by nurses in the process of solving patient problems and decision-making processes with creativity can improve the quality of nursing care. Nurses using critical thinking skills in implementing nursing care can provide evidence-based quality patient care and improve performance (Ateş et al., 2023; Sutriyanti et al., 2019) applied a critical thinking model for nurses in implementing nursing care for postoperative patients. The results of this study obtained critical thinking training for nurses who provide nursing care for postoperative patients can increase their knowledge and improve their abilities when assessing patients and carrying out nursing actions, to improve the quality of nursing care.

Based on the literature review, there are barriers for implementing nurses in using critical thinking when making clinical decisions. These barriers include educational background, experience, and knowledge, creative thinking skills, and self-concept. These factors can enhance or inhibit the application of critical thinking. This may differ among implementing nurses in the context of different educational backgrounds, experience, and knowledge, creative thinking skills, and self-concepts. Therefore, critical thinking of nursing care carried out by nurses can be analyzed between health teams to improve decision making and the quality of nursing care based on various complex

patient conditions, so that it can increase nurses' self-awareness and self-confidence, and increase patient satisfaction during the care process in the hospital. Thus, this study aims to descriptive of critical thinking in nursing care of nurses.

METHODS

Research design

This is a descriptive survey study with a cross-sectional design. The study was carried out in 2019 between October and December.

Participant characteristics

This study was conducted in a hospital that has provided health services. The number of respondents was 69 nurses that made up the sample for this study. Requirements strategies were nurses who had been employed for more than a year, were not on leave, registered nurses who currently practicing in hospital, and provided nursing care met the study's inclusion The exclusion criteria in this study were nurses who did not work in intensive care units and had never had experience working in other hospitals.

Sampling technique and instrument

Purposive sampling was used to choose responden. A questionnaire in two parts was used to measure critical thinking in nursing care and get demographic data. The researcher developed his own questionnaire based on various types of theories about nursing assessment, diagnosis, intervention, implementation and evaluation of nursing related to nursing care in inpatient wards. In addition, it has 30 questions on a 5-point Likert scale from strongly disagree to strongly agree. Of these, 23 statements were positive and 7 were negative. The score had a minimum of 30 and a maximum of 150. Thirty nurses participated in a validity and reliability evaluation of the questionnaires. Based on the Cronbach's alpha value, the tool's reliability coefficient was 0.97, and the Pearson Product Moment was used to assess its content validity. Data collecting was the next step in the procedure once the two tests were completed.

Data collection and Analysis

Gathering data with the help of the leader of the room, data collection was conducted directly with nurses to identify those who satisfied the inclusion requirements. Data is gathered using a self-

report questionnaire. The questionnaire's goal and how to complete it are first explained by the researchers. Once the data was gathered, the researcher processed it using a computer program. In this study, the frequency distribution of respondent characteristics and nurse knowledge of critical thinking in nursing care were utilized to analyze the data.

Ethical considerations

Ethics approval was obtained from the Ethics Advisory Board of the Universitas Sumatera Utara No.1822/V/SP/2019. In addition, formal approval was obtained from the hospital management. Furthermore, each nurse was informed of the purpose of the study by the researcher, and only those who agreed to participate were included.

RESULT

The majority of nurses are in the age range of 20-30 years at 62.3%, the majority are women at 84.1%, the level of education of professional nurses is 65.2%, with the longest work period in the range of 1-4 years at 36.3%, with the majority of nurses' career levels at level one at 85.5%. After finish analysis the data, nurse put the data into a table based on their category, frequency and in percentage. Below is in table 1, the table about distribution of nurses's demograpic data with n=69.

Table 1. Distribution of Nurses' Demographic Data

Category	Frequency (f)	Percentage (%)
Age		
20-30 year old	43	62,3
31-40 year old	23	33,3
41-50 year old	3	4,4
Gender		
Male	11	15,9
Female	58	84,1
Education degree		
Diploma	24	34,8
Professional nurses	45	65,2
Lenght of working		
< 1 year	23	33,3
1-4 year	25	36,3
≥ 5 year	21	30,4
Nursing career ladder		
Level I	59	85,5
Level II	10	14,5

Nurses have critical thinking skills in the majority of the good category of 90.6%. Nurses who have critical thinking in nursing care in the bad category are 9.4% (Table 2).

Table 2. Critical Thinking in Nursing Care of Nurses

Variable	Frequency (f)	Percentage (%)
Good	64	92.7
Bad	5	7.2

Nurses have the highest distribution of critical thinking skills in implementation items at 97.1%, followed by nursing diagnosis and intervention items, and the lowest in critical thinking assessment items at 89.8% and evaluation at 88.4% (Table 3).

Table 3. Distribution of Critical Thinking in Nursing Care of Nurses

Variable	Good	Bad
	f (%)	f (%)
I am able to identify patient data	62 (89.8)	7(10.2)
I am able to determine patient nursing diagnosis	66 (95.6)	3 (4.4)
I am able to determine nursing interventions for patients	64 (92.7)	5 (7.3)
I am able to implement to patients	67 (97.1)	2 (2.9)
I evaluate patient conditions	61 (88.4)	8 (11.6)

DISCUSSION

This study aimed to descriptive of critical thinking in nursing care of nurses. Nurses must have critical thinking skills before providing nursing care to patients, because nurses are health resources who understand information and evidence to be analyzed based on the phenomena that occur (Negreiros et al., 2022). Nurses also assess the critical thinking skills of nurses in various clinical setting. Critical thinking skills are basic competencies that refer to nurses honing analytical skills and reasoning skills for problem solving, creative thinking skills, and critical thinking competencies so as to motivate nurses to be more innovative (Bangun & Pragholapati, 2021). Critical thinking is an important part of providing nursing care, but little can be proven that there is routine evaluation of critical thinking competencies (Pérez et al., 2014). Critical thinking provided during clinical practice encourages professional activities based on evidence and advances aspects of the profession related to competency (Merino, 2014). Critical thinking is an important component in nursing care and caring behavior (Sommers, 2018).

Critical thinking is a major and important component in nursing practice. The importance of critical thinking for nursing is that critical thinking skills can improve educational theory and

nursing skills that have a positive effect on patient care and outcomes (Gezer et al., 2017). The results of this study found that almost all nurses had good critical thinking in providing nursing care. Nurses who have good critical thinking tend to have good caring behavior in providing nursing care. The results of this study are not in line with the results of other studies; it was found that nurses had a high level of critical thinking, only as much as 37.50% (Gezer et al., 2017). The results of this data show that many nurses still have low levels of critical thinking even though critical thinking training has been carried out (Gezer et al., 2017). The results of other studies that nurses are still low in critical thinking in the medical surgical room (Ali-Abadi et al., 2020). The inability of nurses to think critically in nursing care in this study was still found. Nurses who have low critical thinking usually indicate that there will be risks or problems in providing nursing care given to patients while being treated in the hospital. These risks could impact on patient safety and patient complaints and increase the length of patient care, which results in patient dissatisfaction.

Other research results state that critical thinking is related to nurses' clinical decision-making. Nurses who do not have high critical thinking reflect low decision-making. Nurses face increasingly complex challenges in health care settings that require them to improve their critical thinking, problem-solving, and decision-making skills (Ludin, 2018). The results of the study found that there was an increase in critical thinking in nurses after the implementation of critical thinking learning training (Kashaninia et al., 2015). Nurses' cognitive abilities in processing information and making decisions are part of the performance and development of critical thinking of nurses so that they can make decisions and solve problems in the room (Kashaninia et al., 2015). However, it is not in line with the results of other studies that critical thinking can have an impact on the quality of nursing care; in fact, critical thinking has an impact on decision-making only. In addition, it was found that critical thinking of nurses is still at a low level (İlaslan et al., 2023). The results of the study obtained that from other articles are very different from the research that researchers have found; this means that various nurses' abilities in thinking critically about nursing care are still found. Changes in nurses' thinking processes can be improved due to critical thinking training, which can improve nurses' knowledge, self-awareness, and decision-making about the importance of critical thinking in nursing care.

The results of other studies state that critical thinking is useful for analyzing patient clinical data, evaluating the effectiveness of care, collaborating with the nursing team, monitoring and adapting to changes in patient conditions continuously for risk management, and maintaining patient safety,

thereby improving the quality of holistic nursing care provided in accordance with ethical standards and the patient's unique needs (Nilaprapti et al., 2024). Competent nurses can become effective critical thinkers to overcome technological advances and human resource limitations because critical thinking is an important element for clinical decision-making by nurses (Lee & Oh, 2020). Critical thinking learning should begin in college nursing education should place greater emphasis on developing critical thinking and decision-making skills among nurses of all ages and levels of work experience, rather than relying on nurses to simply master the skills. Nurses should be encouraged to participate more in improving and further developing critical thinking and decision-making skills and to equip themselves with current clinical knowledge and skills to meet the expectations that nurses are independent practitioners who provide high-quality care to patients.

LIMITATION

The fact that study still concentrates on critical thinking factors that ought to be able to gauge nurses' decision-making skills when delivering nursing care are its limitations. Instead of using every single unit in the hospital, the study is still being conducted in the inpatient room.

CONCLUSION

The critical thinking ability of nurses in the capable category, especially in the implementation section. The study's findings showed that while most nurses are capable of critical thinking when providing nursing care, some nurses still struggle with this skill. Nurses with strong critical thinking skills demonstrate their capacity for making decisions and resolving issues. In order for self-awareness to function well based on the nurse's competency in delivering nursing care, the head of the room must provide direction, training, incentive, and oversight. Additional investigation is required utilizing various analyses, including qualitative or quasi-experimental comparisons or experiments.

FUNDING

This research is financed by TALENTA USU. No: 439 / UN5.2.3.1/PPM /KP-TALENTA USU / 2019 tanggal 01 April 2019.

ACKNOWLEDGEMENT

The author would like to thank the Ministry of Research and Technology Higher Education of the Republic of Indonesia. Rector of Universitas Sumatera Utara, Research Institute of Universitas Sumatera Utara, Faculty of Nursing of Universitas Sumatera Utara.

REFERENCES

- Ali-Abadi, T., Babamohamadi, H., & Nobahar, M. (2020). Critical thinking skills in intensive care and medical-surgical nurses and their explaining factors. *Nurse Education in Practice*, 45(March), 102783. <https://doi.org/10.1016/j.nepr.2020.102783>
- Ateş, N., Erdal, N., & Harmancı Seren, A. K. (2023). The relationship between critical thinking and job performance among nurses: A descriptive survey study. *International Journal of Nursing Practice*, 29(5), 1–10. <https://doi.org/10.1111/ijn.13173>
- Bangun, A. V., & Pragholapati, A. (2021). Enhancing critical thinking skills in nursing higher education in preparation for the industrial revolution 4.0. *KnE Life Sciences*, 2021(1), 793–804. <https://doi.org/10.18502/cls.v6i1.8756>
- Chinai, S. A., Guth, T., Lovell, E., & Epter, M. (2018). Taking advantage of the teachable moment: a review of learner-centered clinical teaching models. *Western Journal of Emergency Medicine*, 19(1), 28–34. <https://doi.org/10.5811/westjem.2017.8.35277>
- Christodoulakis, A., Zografakis Sfakianakis, M., & Tsiligianni, I. (2023). Suggestions for overcoming the barriers to critical thinking in nursing. *Japan Journal of Nursing Science*, 20(3), 1–4. <https://doi.org/10.1111/jjns.12525>
- Gezer, N., Yildirim, B., & Özaydın, E. (2017). Factors in the critical thinking disposition and skills of intensive care nurses. *Journal of Nursing & Care*, 06(02), 1–5. <https://doi.org/10.4172/2167-1168.1000390>
- İlaslan, E., Adibelli, D., Teskereci, G., & Cura, Ş. Ü. (2023). Studying the impact of clinical decision-making and critical thinking on the quality of nursing care. *Journal of Integrative Nursing and Palliative Care*, 2(2), 7–13. <https://doi.org/10.51847/fstlidady3>
- Kashaninia, Z., Yusliani, F., Hosseini, M. A., & Soltani, P. R. (2015). The effect of teaching critical thinking skills on the decision making style of nursing manager. *Client-Centered Nursing Care*, 16(1), 1–23. <https://doi.org/10.15412/J.JCCNC.04010405>
- Lee, Y., & Oh, Y. (2020). Levels, antecedents, and consequences of critical thinking among clinical nurses: A quantitative literature review. *Journal of Educational Evaluation for Health Professions*, 17, 1–10. <https://doi.org/10.3352/JEEHP.2020.17.26>
- Ludin, S. M. (2018). Does good critical thinking equal effective decision-making among critical care nurses? A cross-sectional survey. *Intensive and Critical Care Nursing*, 44, 1–10. <https://doi.org/10.1016/j.iccn.2017.06.002>
- Negreiros, F. D. da S., Moreira, T. R., Moreira, T. M. M., da Silva, L. M. S., de Freitas, M. C., & Guedes, M. V. C. (2022). The importance of logical thinking for clinical nursing care. *Revista Gaucha de Enfermagem*, 43, 1–6. <https://doi.org/10.1590/1983-1447.2022.20200473.en>
- Nilaprapti, E., Haryanto, H., & Bhakti, W. K. (2024). Berpikir kritis dalam proses keperawatan: Scoping Review. *Jurnal Keperawatan Dan Kesehatan*, 15(1), 20–26. <https://doi.org/10.54630/jk2.v15i1.324>
- Orhan, A., & Çeviker Ay, Ş. (2023). How to teach critical thinking: an experimental study with

- three different approaches. *Learning Environments Research*, 26(1), 199–217. <https://doi.org/10.1007/s10984-022-09413-1>
- Patricia, K.-M., Kabwe, C., Wamunyima, M. M., Margaret, Maimbolwa, M., & Dianna, J. L. (2022). Evidence based practice and critical thinking in nursing education and practice: A scoping review of literature. *International Journal of Nursing and Midwifery*, 14(4), 65–80. <https://doi.org/10.5897/ijnm2022.0511>
- Pérez, E. Z., Canut, M. T. L., Falcó-Pegueroles, A., Puig-Llobet, M., Moreno-Arroyo, C., & Roldán-Merino, J. (2014). Critical thinking in nursing" scoping review of the literature. *Procedia Manufacturing*, 1, 1–17. <https://doi.org/10.1111/ijn.12347>
- Polat, Ş., Kutlu, L., Ay, F., Purİsa, S., & Erkan, H. A. (2019). Decision-making styles, anxiety levels, and critical thinking levels of nurses. *Japan Journal of Nursing Science*, 16(3), 309–321. <https://doi.org/10.1111/jjns.12240>
- Sangaleti, C., Schweitzer, M. C., Peduzzi, M., Zoboli, E. L. C. P., & Soares, C. B. (2017). Experiences and shared meaning of teamwork and interprofessional collaboration among health care professionals in primary health care settings: a systematic review. *JBIS Database of Systematic Reviews and Implementation Reports*, 15(11), 2723–2788. <https://doi.org/10.11124/JBISRIR-2016-003016>
- Sommers, C. L. (2018). Measurement of critical thinking, clinical reasoning, and clinical judgment in culturally diverse nursing students – A literature review. *Nurse Education in Practice*, 30(April), 91–100. <https://doi.org/10.1016/j.nepr.2018.04.002>
- Sutriyanti, Y., Misniarti, & Utario, Y. (2019). The application of the nurse's critical thinking model in implementing nursing care of post operative patients. *Advances in Health Sciences Research (AHSR)*, 14(ICIHC 2018), 364–367. <https://doi.org/10.2991/icihc-18.2019.78>