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The Determinants of Nurses' Critical Thinking by Documenting the Nursing Process in the Regional General Hospital of Banda Aceh Municipality, Indonesia

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Abstract

Documenting the nursing process remains an issue in hospital settings. It is still found that nurses have not developed adequate critical thinking skills. Documentation of the nursing process from assessment to evaluation has not been described completely and precisely. This study aimed to expound the determinants of nurses' critical thinking by documenting the nursing process at the Regional General Hospital Banda Aceh Municipality. Quantitative research with a cross-sectional study design was employed. The research population was 247 nurses, sample size was determined using the Cohen table with a total of 151 respondents and 151 medical records, sampling used purposive sampling. Data collection tools used the

California Critical Disposition Thinking Inventory (CCTDI) questionnaire, data analysis used descriptive and inferential statistical tests; chi-square. The results showed that there was a relationship between truth seeking ($p=0.017$), open mindedness ($p=0.006$), analysis ($p=0.005$), systematicity ($p=0.011$), self-confidence ($p=0.017$), curiosity ($p=0.011$), maturity ($p=0.004$), and critical thinking ($p=0.041$) with documentation of the nursing process. Based on the results of this research, it was necessary to maintain and improve positive critical thinking skills in nurses so that they were able to document the nursing process well so as to improve quality nursing care.

Keywords: Critical Thinking, Documentation of Nursing Processes, Nurse

1. Introduction

Critical thinking is a significant component of professional nursing since it is not only an essential skill for processing patient data but it is also inherent in making sound clinical judgments and safe patient care decisions. Nursing actions require critical thinking to integrate increasingly complex knowledge, skills, technology and patient care activities into evidence-based nursing practice ^[14]. Nurses' thinking abilities are required before making judgments in care to ensure that the care delivered is maximum and much better ^[1]. Critical thinking is the primary technique for nurses' work in evolving the role of professional nurses from task-centered functions such as documentation to functions geared toward problem solving, decision making, and action ^[2]. Critical thinking is comprised of various components, including open-mindedness, truth seeking, analysis, systematicity, self-confidence, inquisitiveness, and maturity ^[3]. Furthermore, critical thinking will be demonstrated when documenting the nursing process.

The nursing process is a five-step process which nurses employ in implementing nursing care to assess the patient's health condition, to describe, to explain, to assess and to determine nursing care on an ongoing basis which of rational and systematic method of planning and providing nursing care, the five steps consist of assessment, diagnosis, intervention, implementation and evaluation ^[3].

Previous studies regarding the application of critical thinking by nurses in implementing the nursing care for patients at Curup District Hospital were found in a small percentage. The findings (31%) were not good at carrying out assessments, a small portion (34%) were not good at determining nursing diagnoses, a small portion (26.5%) were deficient at planning, a small

percentage (26%) were not good at carrying out actions, and a small portion (36.3%) were not good at evaluating nursing care. Generally, the majority (78%) of critical thinking in accomplishing the nursing care had good application of critical thinking by nurses in carrying out nursing care [4].

Based on the observations and interviews with five ward heads conducted at the Regional General Hospital Banda Aceh Municipality, the documentations which were not appropriate still existed. In the medical records there were still similar notes from the previous shift and the following shift. Documentation of the nursing process was not been described completely and precisely. This study aimed to expound the determinants of nurses' critical thinking by documenting the nursing process at the Regional General Hospital Banda Aceh.

2. Methods

In this study, the qualitative with cross sectional design was employed. The population of all nurses working at the Regional General Hospital, Banda Aceh Municipality was 247 people. The sample size was calculated using the Cohen table with a coefficient level of 95%, alpha 0.1 with a research sample size of 151 nurse respondents and medical records.

The data collecting procedures employed demographic data instruments, the California Critical Thinking Disposition Inventory (CCTDI) questionnaire [5], and observation questionnaires documenting the nursing process, including. The first assessment includes assessment, diagnosis, planning, execution, evaluation, and reassessment, as documented in the Integrated Patient Progress Note (CPPT) [6].

3. Results

Table 1: Respondents Characteristics

S. No	Characteristics	f	%
1	Age		
	a. Late adolescent (17-25)	2	1,3
	b. Early adult (26-35)	106	70,2
	c. Late adult (36-45)	42	27,8
	d. Early elderly (46-55)	1	7,0
2	Gender		
	a. Female	111	73,5
	b. Male	40	26,5
3	Education		
	a. Nurse of Professional	62	41,1
	b Nurse of Vocation	89	58,9
4	Employment status		
	a. Civil Servants	99	65,6
	b. Not Civil Servants	52	34,4
5	Years of service		
	a. < 10 years	98	64,9
	b. ≥ 10 years	53	35,1
6	Training		
	a. Yes	92	60,9
	b. Never	59	39,1

According to Table 1, it showed that the highest age in early adult was 106 respondents (70.2%), 111 respondents (73.5%) were females, 98 respondents (64.9%) had worked under 10 years. Additionally, the number of the highest level of educations was Diploma III of Nursing including 89 respondents (58.9%), and the majority of employment status was state civil apparatus involving 99 respondents (65.6%).

Last but not least, 92 respondents (60.9%) had attended training.

Table 2: Frequency Distribution of Nurses' Critical Thinking Descriptions

S. No	Variable/Sub-Variable	Category	f	%
1.	Critical thinking	Positive	137	90,7
		Ambivalent	14	9,3
2.	Seeking truth	Positive	129	85,4
		Ambivalent	22	14,6
3.	Open minded	Positive	118	78,1
		Ambivalent	33	21,9
4.	Analytical	Positive	126	83,4
		Ambivalent	25	16,6
5.	Systematicity	Positive	125	82,8
		Ambivalent	26	17,2
6.	Confident	Positif	129	85,4
		Ambivalen	22	14,6
7.	Curiosity	Positive	125	82,8
		Ambivalent	26	17,2
8.	Maturity	Positive	96	63,6
		Ambivalent	55	36,4

Table 2 expressed that the results of the analysis of critical thinking variables and sub-variables for nurses had no results in the negative category, all of them were in the good and moderate categories. Critical thinking was 137 respondents (90.7%) in the positive category. Meanwhile, for the critical thinking sub-variable, all analysis results were in the positive category with different percentages, namely; seeking the truth as many as 129 respondents (85.4%), open minds as many as 118 respondents (78.1%), analysis as many as 126 respondents (83.4%), systematicity as many as 125 respondents (82.8%), confidence as many as 129 respondents (85.4%), curiosity was 125 respondents (82.8%), and maturity was 96 respondents (63.6%).

Table 3: Frequency Distribution of Nursing Process Documentation

S. No	Category	f	%
1.	Good	66	43,7
2.	Poor	85	56,3
	Jumlah	151	100,0

The Table 3 represented that 85 (56.3%) of the nursing process documentation was in the deficient category at the Regional General Hospital, Banda Aceh Municipality.

Table 4: The Correlation between Critical Thinking and Nursing Process Documentation

Variable/Sub variable	Documentation of Nursing Process				Total		P- value
	Good		Poor				
	f	%	f	%	f	%	
Seeking truth							
Positive	62	48,1	67	51,9	129	100	0,017
Ambivalent	4	18,2	18	81,8	22	100	
Open minded							
Positive	59	50,0	59	50,0	118	100	0,006
Ambivalent	7	21,2	26	78,8	33	100	
Analytical							
Positive	62	49,2	64	50,8	126	100	0,005
Ambivalent	4	16,0	21	84,0	25	100	
Systematicity							
Positive	61	48,8	64	51,2	125	100	0,011
Ambivalent	5	19,2	21	80,8	21	100	

Confident							0,017
Positive	62	48,1	67	51,9	129	100	
Ambivalent	4	18,2	18	81,8	22	100	
Curiosity							0,011
Positive	61	48,8	64	51,2	125	100	
Ambivalent	5	19,2	21	80,8	26	100	
Maturity							0,004
Positive	51	53,1	45	46,9	96	100	
Ambivalent	15	27,3	40	72,7	55	100	
Critical thinking							0,041
Positive	64	46,7	73	53,3	137	100	
Ambivalent	2	14,3	12	85,7	14	100	
Total	66	66	43,7	85	56,3	151	

Based on Table 4, it was exposed that from the 151 respondents, 129 respondents were in the positive category in searching for the truth and 67 respondents (51.9%) had insufficient documentation of the nursing process, with a p-value of $0.017 < 0.05$. There were 59 respondents (50.0%) in the positive category of critical thinking: open minded with good documentation of the nursing process and 59 respondents (50.0%) with poor documentation of the nursing process, with a p-value of $0.006 < 0, 05$. Furthermore, there were 126 respondents in the positive category when viewed from critical thinking: nurse analysis, where 64 respondents (50.8%) carried out insufficient documentation of the nursing process, with a p-value of $0.005 < 0.05$. There were 125 respondents in the positive category when viewed from critical thinking: systematicity of nurses, 64 other respondents (51.2%) were lacking in documenting the nursing process with a p-value of $0.011 < 0.05$. 67 respondents (51.9%) were lacking in documenting the nursing process. Meanwhile, 22 other respondents fell into the ambivalent category regarding critical thinking; confident with a p-value of $0.017 < 0.05$. There were 64 respondents (51.2%) lacking in documenting the nursing process, with a p-value of $0.011 < 0.05$. A total of 51 respondents (53.1%) were in the positive category for critical thinking: maturity with good documentation of the nursing process, while 45 respondents (46.9%) were positive for critical thinking: maturity with poor documentation of the nursing process. 15 respondents (27.3%) were in the ambivalent category regarding critical thinking: maturity with a well-carried out documentation process, with a p-value of $0.004 < 0.05$. Furthermore, it was found that 73 respondents (53.3%) had insufficient documentation of the nursing process, with a p-value of $0.041 < 0.05$.

4. Discussion

The findings of the investigation revealed that there was a correlation between seeking the truth and documenting the nursing process. This was in line with other research that there was a correlation between nurses' critical thinking in carrying out nursing documentation at the Aceh Government Regional Hospital and was in the good category, containing 77 respondents (72.0%). The results of previous research disclosed that nurses seeking the truth were in the good category, including 77 respondents (81.1%); the nurses had the desire to seek the best knowledge and were encouraged to always be curious^[7].

Seeking the truth requires knowledge and courage in asking real and honest questions in order to obtain newly discovered information and evidence. A critical thinker has characteristics, one of which is intellectual perseverance, namely the desire to understand the material and seek

further truth even though it is difficult^[8]. According to researchers, nurses' search for truth is the critical thinking ability that nurses must own in the process of documenting deaths in order to improve progress according to the times and improve knowledge in carrying out precise and accurate documentation to make it easier for nurses to transmit deficiencies in the protection process.

The results of this study illustrated that there was a correlation between critical thinking: an open mind and documentation of the nursing process. Critical thinking based on the element of open-mindedness of nurses in accomplishing the nursing documentation in the wards of the Aceh Government Regional Hospital, 99 respondents (92.5%) were in the good category.^[7] Different from other researches with the research^[15] where open-mindedness in critical thinking of nurses was in the medium category, namely 135 respondents (68.88%). Likewise, other research indicated that open-mindedness of nurses was in the medium category^[9].

Being sensitive to the possibility of one's own prejudices and respecting the rights of others to have different opinions in the nursing process is open-minded^[3]. In analyzing complete information, nurses must be open-minded and capable of examining activities that have been and will be made without making fast and irresponsible judgments.^[10] From the results of research conducted by researchers, respondents who had worked for more than 10 years and who had an age range of 26-35 years tended to have an open mind and were able to accept and adjust wrong thoughts to become better in all aspects. According to the researchers' expectations, nurses who are open to critical thinking would have flexible attitudes and viewpoints and will be able to readily adjust to the challenges that arise during the nursing documentation process.

The findings also revealed a link between critical thinking, nurse analysis, and nursing process documentation. This study was consistent with previous research in which critical thinking: analysis was included in the good or positive critical thinking group, with 107 respondents (54.59%)^[15]. Furthermore, 87 respondents (81.3%) reported strong critical thinking based on nurse analysis in carrying out nursing documentation in the wards of the Aceh Government Regional Hospital^[2]. Additionally, the results showed that nurses who received more training had evidence-based knowledge, allowing them to better anticipate patient needs, identify emerging problems, and provide appropriate care for patients^[3].

Good analysis means that the nurse will be careful while having problems in the practice area, utilize reasoning and objective evidence, and be able to take responsibility in solving problems. Identifying a problem and anticipating its possible occurrence and consequences requires an analysis of knowledge based on evidence so that it can anticipate and minimize the emergence of problems that will occur more quickly^[12]. According to researchers, nurses must have strong arguments in the nursing documentation process. By having good arguments, nurses will also have a strong basis for making decisions regarding nursing documentation.

The findings also illustrated that there was a correlation between critical thinking: nurses' systematicity and documentation of the nursing process. In line with other research, critical thinking based on systematic elements of nurses in carrying out nursing documentation in the wards of the Aceh Government Regional Hospital was in the good

category; 84 respondents (78.5%)^[7]. Critical thinking: analysis of nurses was in the good category, namely 57 respondents (60%)^[12]. Dealing with, the majority of research was in the good category^[9].

Nurses having a systematic attitude have an organized character, focus and perseverance in working hard so they are able to make good decisions. According to researchers, systematicity is an effort to sort out situations correctly, whether problems that are inside the line or outside the line and look for relevant information in documenting the nursing process^[3].

The findings of this study revealed an association between critical thinking, nurse self-confidence, and documentation of the nursing process. However, this study differed from other studies in which the critical thinking score: self-confidence was low^[9]. It revealed that 57 respondents (53.3%) rated critical thinking: self-confidence as intermediate^[7]. In the next study, critical thinking and self-confidence, 156 nurses (79.59%) reported positive critical thinking^[15].

Self-confidence influences almost every aspect of an individual's life, from the individual's ability to think optimistically and persevere through difficulties, and the development of self-confidence is a critical component in nursing decision making^[13].

Self-confidence influences almost every aspect of an individual's life, from the individual's ability to think optimistically and persevere through difficulties, and the development of self-confidence is a critical component in nursing decision making^[15]. Other research found that the critical thinking component of nurses' interest was in the medium range^[9].

Critical thinking based on elements of nurses' curiosity in carrying out nursing documentation in the wards of the Aceh Government Regional Hospital was in the good category; 82 respondents (76.6%)^[7]. According to researchers, nurses were motivated to increase their insight and view challenges as opportunities to learn. Additionally, nurses having curious and conscientious may be more likely to utilize research findings in their work, which can add to high-quality nursing care.

Curiosity to recognize and absorb reliable information, as well as eagerness to obtain knowledge, can enhance the value of learning. The eagerness to obtain knowledge and insight, as well as the desire to learn more about how to improve the value of learning, has the potential to grow expertise in advanced clinical practice^[3].

The results of this research also showed that there was a correlation between critical thinking: nurse maturity and documentation of the nursing process. In critical thinking, accepting an acceptable opinion and solution and being able to analyze the judgments taken makes the decisions taken wiser so that one was able to approach problems^[3]. From the results of research on demographic data obtained by researchers, most of the respondents were in the early and late adulthood range, where this age was an age that was mature in thinking and had a tendency to obtain information that can be used in making the correct decisions.

From the research results, it was found that respondents who were of mature age, had more than 10 years of work experience with a nursing education background, had attended training and had employment status as a state civil apparatus had a greater opportunity to think critically so that

they could carry out the nursing documentation process properly and precisely.

5. Conclusions

Based on the research results, it can be concluded that there is a correlation between truth seeking, analysis, systematicity, self-confidence, curiosity, maturity and critical thinking with documentation of the nursing process. It is essential that nurses enhance their expertise and knowledge of the need of thorough documentation of the nursing process in order to provide better nursing care to patients.

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