



Functional Nursing and Team Care Model Toward the Quality of Nursing Care Services in 'Aisyiyah Ponorogo General Hospital

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Abstract. The professional nursing practice model is a system, process, and values that make nurses manage the nursing care of the patient. However, it still needs to be fully implemented and oriented toward efforts to meet the needs of the patient through cooperation and collaboration. This study aimed to explain the effectiveness of applying the functional nursing care model and model of professional nursing care team toward the quality of nursing care services in 'Aisyiyah Ponorogo General Hospital. This research used a static group comparison pre-experimental design. There were 59 respondents, consisting of 23 patients and 13 nurses for the Siti Fadilah ward and 13 patients and 10 nurses for the Multazam ward, taken using purposive sampling. The researchers collected data using questionnaires and analyzed the data using Mann Whitney U Test. The result showed that there was effectiveness model of professional nursing care teams toward the quality of nursing care services in 'Aisyiyah Ponorogo General Hospital, with each significant level $p = 0.045$. It can be concluded that the model of professional nursing practice teams is more effective in the quality of nursing care services. It can be caused by division and a clear delegation of tasks, resulting in increased nurse responsibilities in providing nursing care to the patient. And this model is expected not only applied in the Siti Fadilah ward but also in all inpatient units in 'Aisyiyah Ponorogo General Hospital. Thus, improving the quality of nursing services can be achieved optimally.

Keywords: functional nursing model · team care model · quality of nursing care services

1 Introduction

Professional nursing service is a nursing practice that is based on professional values, namely intellectual values, moral commitment to oneself, responsibility to the profession and society, autonomy, control of responsibility, and accountability [1]. In Indonesia,

there are still many obstacles to achieving quality nursing services that do not reflect the practice of professional services. The method of providing nursing care that is carried out is not fully oriented to efforts to meet client needs but is more oriented to the implementation of tasks. This is due to the high workload of nurses, many nurses who are incompetent in intervening, weak clinical supervision, lack of development of practice standards, overlapping clinical skills of nurses, and nurses still working on patient administration [2]. Providing professional nursing care requires a management approach that allows the application of assignment methods that can support the application of professional nursing in hospitals. Nursing care models that we know are functional models, case models, team models, and primary models. The possible methods of providing professional services are the team and primary methods [3]. The quality of less professional nursing services is caused by the model of providing nursing care that is applied still using the functional model. The implementation of this system is based on the task orientation of the nursing philosophy, where nurses carry out certain actions based on the existing schedule of activities [4]. This study aimed to analyze the effectiveness of the functional and team models on the quality of nursing services at the 'Aisyiyah Ponorogo General Hospital.

Professional nursing practice models have been implemented in several countries, including hospitals in Indonesia, as an effort by hospitals to improve the quality of nursing care through several activities that support professional and systematic nursing activities [5]. 'Aisyiyah Ponorogo General Hospital has 6 inpatient units, all of which are still using the functional nursing care model and functional-team modifications. This causes patients not to get comprehensive and optimal services. Based on the results of the January-March 2019 patients satisfaction survey, it was found that nursing services still received complaints from the public, especially about the attitudes and abilities of nurses in providing nursing care. The assessment of the quality of nursing care carried out at the 'Aisyiyah Ponorogo General Hospital in December 2019 from 122 respondents, the results obtained from instrument A regarding Nursing Documentation of 69.27%, instrument B about the level of patient satisfaction at 68.25%, and instrument C about Nursing Actions 87.4% [6].

Efforts to achieve good quality nursing care require an application of an appropriate model of professional nursing care. The team model is a model of providing nursing care where a professional nurse leads a group of nursing staff in providing nursing care to a group of clients through cooperative and collaborative efforts [7]. This model is based on the belief that each member of the group has a contribution to the planning and providing of nursing care so that a high level of motivation and sense of responsibility for nurses arises so that it is hoped that the quality of nursing care will increase; therefore there needs to be a coordination of all aspects [8].

2 Method

2.1 Research Design

The research locations were Siti Fadilah Room and Multazam Room of 'Aisyiyah Ponorogo General Hospital. The research design used a *pre-experimental with static-group comparison*, meaning that the design was designed to determine the effect of an

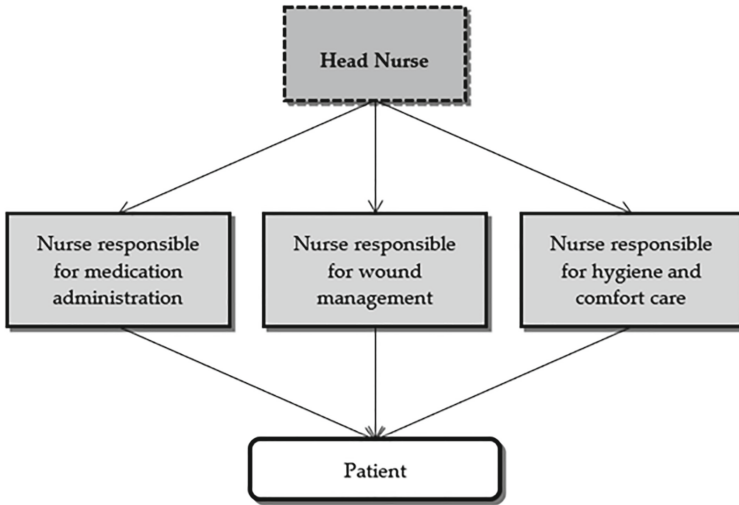


Fig. 1. Structure of the functional nursing method [9]

action on a group of subjects who received treatment, then compare it with a group of subjects who did not receive treatment. The team model (Fig. 2) was applied to Siti Fadilah's room. In practice, nurses were divided into 3 teams; each team was responsible for 8 patients. In the Multazam room, a functional model (Fig. 1) was applied. Assessment of service quality was carried out before and after the model was implemented. The intervention was implemented for 2 weeks.

2.2 Study Participants

The population in the study was 59 respondents, which included inpatients and nurses in the Multazam Room, totaling 13 patients and 10 nurses, as well as inpatients and nurses in the Siti Fadilah Room, totaling 24 patients and 13 nurses. The sampling technique for patients used purposive sampling with inclusion criteria: cooperative, aged over 17 years, at least 3 days hospitalization.

2.3 Instrument and Data Collection

The variables in this study include functional and team model interventions and service quality, including nursing care documentation, patient satisfaction levels, and nursing actions. The instrument used is the ABC instrument from the indicators of the quality of nursing care from the Ministry of Health of the Republic of Indonesia. The data collection process starts with an assessment of the quality of nursing care, which includes nursing documentation, nursing actions, and the level of patient satisfaction. Furthermore, the application of the functional model was in the Multazam room, and the team model in the Siti Fadilah room. Then an evaluation of the quality of nursing care was carried out after the implementation of the team and functional model for 2 weeks.

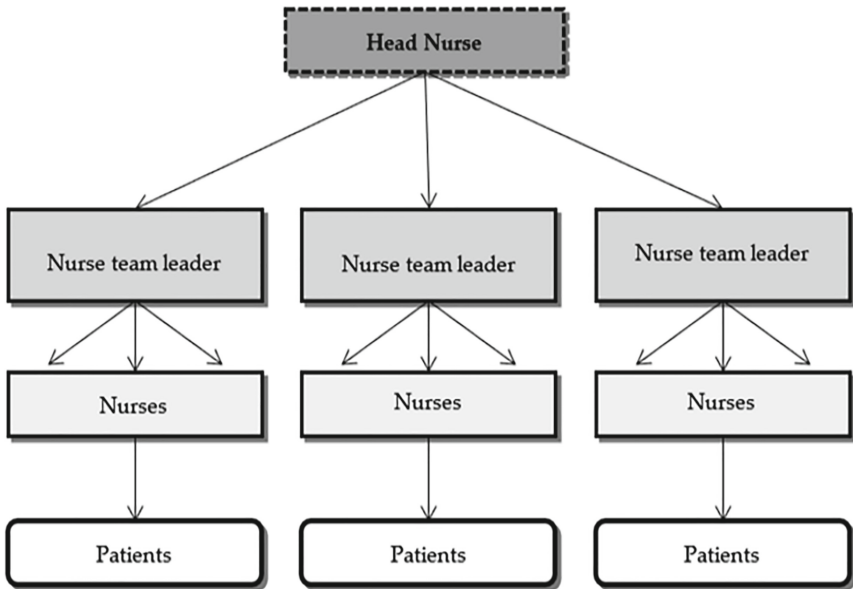


Fig. 2. Structure of the team nursing method [9]

3 Data Analysis

Data were analyzed using the Mann-Whitney U Test to determine the effect between the independent and dependent variables with a significance level of p 0.05.

4 Results

Table 1 Shows that the characteristics of patients in the Siti Fadilah room were 12 female people (52.2%), 10 people (43.5%) aged 41–50 years, 17 married women (73.9%), 9 people (39,1%) who had elementary school education. All of them were hospitalized for 3–7 days. While in the Multazam room, 8 men (61.5%), 6 people (46.2%) aged 17–30 years, 7 married people (53.8%), and 6 people (46.2%) who had high school education, and 8 people who (61.5%) were treated for 3–7 days.

The characteristics of nurses based on Table 2, in Siti Fadilah’s room, are 9 female nurses (69.2%), 7 nurses (53.8%) aged 26–30 years, 10 nurses (76.9%) were married, 11 people (84.6%) had Diploma education, and 9 people were permanent employees. Then in the Multazam room, 8 nurses (80%) were female, 5 nurses (50%) were aged 26–30 years, 8 nurses (80%) were married, 9 people (90%) had a Diploma education, and 8 people were permanent employees (Table 3).

Table 1. Characteristics of Patients

Variable	Category	Siti Fadilah (n = 23)		Multazam (n = 13)	
		Frequency	Percentage	Frequency	Percentage
Gender	Male	11	47.8	8 5	61.5
	Female	12			
Age	17 – 30 y	8	34.8	6	46.2
	31 – 40 y	5	21.7	2	15.4
	41 – 50 y	10	43.5	5	38.4
Marital status	Not Married	6	26.1	6	46.2
	Married	17	73.9	7	53.8
Level of education	Primary school	9	39.1	3	23.1
	Junior high school	8	34.8		15.4
	High school College	51			
Long treated	3 – 7 days	23	100	8	61.5
	8 – 12 days	0	0	5	38.5

Table 2. Characteristics of Nurses

Variable	Category	Siti Fadilah (n = 13)		Multazam (n = 10)	
		Frequency	Percentage	Frequency	Percentage
Gender	Male	4	30.8	2	20
	Female	9	69.2	8	80
Age	20 – 25 y	4	30.8	2	20
	26 – 30 y	7	53.8	5	50
	31 – 35 y	2	15.4	3	30
Marital status	Not married	3	23.1	2	20
	Marry	10	76.9	8	80
Professional Education	Diploma	11	84.6	9	90
	Bachelor	2	15.4	1	10
Employment status	Contract worker	4	30.8	2	20
	Permanent	9	69.2	8	80

Table 3. Quality of Nursing Services

Room/quality indicator	Functional Model (Multazam Room)	Team Model (Siti Fadilah Room)
Documentation	X = 42.2	X = 43.4
	SD = 1.14	SD = 2.50
	p = 0.011	p = 0.015
Satisfaction	X = 53.5	X = 68.9
	SD = 20.17	SD = 15.09
	p = 0.007	p = 0.006
Action	X = 27.7	X = 53.5
	SD = 16.02	SD = 20.17
	p = 0.048	p = 0.043

5 Discussion

5.1 Functional Model on the Quality of Nursing Care Services

The Multazam room had 8 female nurses (80%), 5 nurses (50%) aged 26–30 years, 8 married nurses (80%), 9 people (90%) who had a Diploma education, and 8 people who were permanent employees (Table 1). Nurse demographic factors, institutional factors, and social and cultural factors were hindering the implementation of nursing processes in clinical settings. There was a significant association between nursing process implementation and nurses' age and experience. The younger nurses were more likely to practice the nursing process compared to elderly nurses. Recently, qualified nurses with experience of fewer than 5 years and experience between 5 and 10 years were more likely to implement the nursing process, respectively, compared to the nurses with more years of experience [10]. Patients in the Multazam room were 8 men (61.5%), 6 people (46.2%) aged 17–30 years, 7 married people (53.8%), 6 people (46.2%) who had high school education, and 8 people (61.5%) who were hospitalized for 3–7 days. Some researchers show that the older the patients are, the more satisfied they are, while other researchers deny the correlation between age and the level of satisfaction. Some researchers argue that men are more satisfied, whereas some argue the opposite, while marital status, publicly, does not affect the level of patient satisfaction. Patients whose financial situation is poor and those who are less educated are more satisfied with health care than those with better financial conditions [11].

Based on the data analysis of the quality of nursing care services on the application of the functional nursing care model in the Multazam Room, the results obtained are nursing documentation with a value of $p = 0.011$, patient satisfaction with a level of $p = 0.007$, and nursing actions with a value of $p = 0.048$. This means that the application of the functional model only affects the level of patient satisfaction. Patients reported that information played an important role in their satisfaction, and they emphasized that information provided by nurses should be clear and concise. Therefore, nurses must

realize that information provision and education are nursing responsibilities and that they should collaborate with other health-care staff to provide complete and relevant information to patients [12]. The functional nursing method gives nurses the need to care for many patients in hospital settings [1]. The delivery of nursing care was based on the distribution of standardized tasks by the nurses, who achieved proficiency through the systematic repetition of techniques (such as intravenous drug administration, wound care, and vital signs monitoring). However, this method of care delivery persisted and is still used today in specific clinical contexts, which is considered inappropriate given the associated risks to the quality of care delivery [1]. Functional nursing, also known as task nursing, focuses on the distribution of work based on the performance of tasks and procedures, where the target of the action is not the patient but rather the task [3]. This is due to the limited number and ability of nurses, where each nurse only performs 1–2 types of nursing interventions for all patients. As shown in Fig. 1, this care delivery model is characterized by a lack of coordination between the parts, represented by task-oriented care delivery [9]. For nurses, it does not allow the application of the nursing process, leading to major difficulties in the identification of patient needs and poor records; it does not promote the continuity of care; it leads to some activities being “forgotten” due to lack of planning; the nurse does not have an overall view of the patients; it hinders the assessment of care; it increases the risk of healthcare-associated infections (HAIs); it hinders the interaction and the interpersonal relationships between health professionals; it creates poor team spirit and lack of motivation by “routinizing” tasks that are repeatedly performed by the same nurses [8, 9].

5.2 Team Model on the Quality of Nursing Care Services

Based on Table 2, in Siti Fadilah’s room, there are 9 female nurses (69.2%), 7 nurses (53.8%) aged 26–30 years, 10 married nurses (76.9%), 11 people (84.6%) who had Diploma education, and 9 people who were permanent employees. Nursing age, department, job title, salary, education level, marital status, etc., can affect the quality of nursing work life. Nurses with married, older age and of longer nursing age are the backbone of hospital nursing work; they are responsible for teaching, scientific research, and taking care of families and children besides nursing work; these factors often lead to the decline of nurses’ physical fitness, energy, and quality of work life [13]. Nurses with lower professional titles had a poor perceived quality of work life; at the same time, compared with nurses with an annual salary of less than 40,000, nurses with an annual salary of more than 40,000 had higher quality of work life [14]. There is a difference between the educational background of the registered nurse with diplomas, ADNs, or BSN, nor is there much difference noticed between registered nurses and licensed practical nurses [LPNs] in terms of task completion [15]. Table 1. Shows the characteristics of patients in the Siti Fadilah room, including 12 women (52.2%), 10 people (43.5%) aged 41–50 years old, 17 married people (73.9%), 9 people (39.1%) who had elementary school education. All of them were hospitalized for 3–7 days. Several socio-demographic factors were associated with seven dimensions of patients’ satisfaction. Age was found to be the strongest predictor of patient satisfaction across most of the dimensions [16]. There are partial effects of patients’ demographic features on their satisfaction. Whereas age and marital

status can affect patient satisfaction, other factors, including gender and education level, fail to pose any impact [17].

5.3 Public Demographic Factors Affect the Quality Of Nursing Work Life and Patient Satisfaction

Analysis of data on the application of the professional nursing care team model in the Siti Fadilah Room, the results were nursing documentation with a significance value of $(p) = 0.011$, the level of patient satisfaction with a significance value of $(p) = 0.007$, and nursing actions with a significance value of $(p) = 0.048$. The team professional nursing care model enables comprehensive nursing services, supports the implementation of the nursing process, allows communication between teams so that conflicts are easily resolved, and gives satisfaction to team members. The team method is a method of providing nursing care in which a professional nurse leads a group of nursing staff in providing nursing care to groups of clients through cooperative and collaborative efforts [3]. This model is based on the belief that each member of the group has a contribution to the planning and providing of nursing care so that a high level of motivation and a sense of responsibility for nurses arises so that it is expected that the quality of nursing care services will increase [8]. The team nursing practice delivery model involves a group typically made of a least one team leader and nursing staff with various levels of educational preparation and skills who work collaboratively and cooperatively under a team leader to deliver care to a group of patients [15]. The team leader typically was the highest level of education and expertise among the team members. Although the team leader made most decisions about task allocation, the charge nurse made the assignments to teams and selected the team leader for each shift [18]. The application of the team professional nursing care model in the Siti Fadilah room can improve the quality of nursing care services for patients. This is due to cooperative and collaborative efforts between teams as well as clear division and delegation of tasks to increase patients' satisfaction and optimal nursing care implementation. In addition, the role of the head of the room for planning, organizing, directing, and supervising greatly determines the success of this model.

5.4 Quality of Nursing Care Services at 'Aisyiyah Ponorogo General Hospital

The results of the assessment of Siti Fadilah's room using the team model showed that the nursing documentation component was 43.4, nursing actions were 53.5, and the patient satisfaction level was 68.9. Then the Multazam room that applied the functional model, the results on the nursing documentation component were 42.2, nursing actions were 53.5, and the patients' satisfaction levels were 27.7. In public, the assessment of the quality of nursing care services on the component of nursing documentation was 95.16%, nursing actions were 76.22, and the level of patient satisfaction was 61.22. The professional nursing care model is a framework that defines the four elements, namely: nursing standards, nursing processes, nursing education, and the professional nursing care model. The definition is based on the principles and values that are believed and will determine the quality of the production or service of nursing services. In contrast, the success of nursing care for patients is largely determined by the selection of the right

professional nursing care model [3]. The team professional nursing care model is a model of providing professional nursing care that allows providing comprehensive nursing services, supports the implementation of the nursing process, and allows communication between teams so that nursing problems that arise in patients are easily overcome, which will give satisfaction to the patient [19].

The results of the evaluation of the quality of nursing care services carried out using instruments from the Indonesian Ministry of Health, 2005, can be categorized that the quality of nursing care services at the 'Aisyiyah Ponorogo General Hospital is good for the components of nursing documentation and nursing actions, while the component level of patient satisfaction is in the adequate category. The selection and application of the functional nursing care model at the 'Aisyiyah Ponorogo General Hospital, which has limited nurses with a large number of patients, is currently considered quite efficient but does not provide satisfaction for both nurses and patients. This is evidenced by the results of the evaluation of the quality component of nursing care and nursing documentation, which is higher than the level of patient satisfaction and nursing actions. There is a possibility that the system of division and delegation of tasks is not clear. The head of the room and senior nurses do more managerial activities so that the needs of patients are not paid attention to. In addition, the lack of supervision from the head of the room to the nurses is also a problem. As a result, the nurse did not get direction and supervision related to the nursing actions carried out on the patient.

6 Conclusion

The team model is more effective than the functional model in the quality of nursing care services. This is due to good cooperation between the head of the room, team leader, and team members that will have an impact on improving the quality of nursing care services in particular and the quality of health services in public. The professional nursing care model that currently has to be implemented in hospitals other than primary is the team model because this method allows professional nurses to provide comprehensive and continuous nursing care. In addition, a good communication process between teams will be created to help solve patients' problems. Therefore, it is necessary to review it in terms of human resources, in this case, nurses and facilities and infrastructure. In other words, nursing education is important to increase understanding of the application of the professional nursing care model so that the selection of the appropriate professional nursing care model can be made that has an impact on improving the quality of nursing care services.

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Authors' Contributions. All authors collected data, analyzed results, and developed the final report and knowledge translation materials. All authors reviewed, revised, and approved the final manuscript.

Availability of Data and Materials. Raw data for this study will not be shared to protect the privacy of the staff and patients who participated in the research. Materials used to collect data (e.g., interview guides and surveys) can be obtained by emailing the first author.

Declaration of Ethical Considerations. This was an evaluation of an internal initiative and therefore did not require ethics approval. However, the authors sought privacy impact assessment and complied with all relevant health information regulations and ethics guidelines throughout the project.

Conflict of Interest. The authors declare no conflicts of interest regarding the publication of this paper.

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