The Effect of Service Quality on Patient's Family Satisfaction in the Nicu Care of the Public Hospital in Datu Beru Takengon Region

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Article Info	Abstract
	The World Health Organization (WHO) infant mortality rate is the first indicator in determining a child's health status, 3.6 million of the 120 million newborns experience asphyxia, and nearly 1 million babies die. Meanwhile, the prevalence of patients treated at the NICU at the Datu Beru Takengon Hospital from 2016 to 2019 continues to decline every year. The purpose of this study was to determine and analyze the effect of technical competence, efficiency and patient safety on patient family satisfaction. The research design used an analytic survey with a cross-sectional design. The data that had been collected were processed using univariate and bivariate and multivariate analysis. The population of all parents of babies who were treated in the NICU Care Room at Datu Beru Takengon Hospital was 329 people. The sampling technique used accidental sampling. The number of samples that will be studied is 67 people. The results of the research on technical competence variables obtained p-value = 0,000, efficiency 0,000, and patient safety 0,000 <α 0.05, meaning that there is an influence between technical competence, efficiency and patient safety on family satisfaction, from the results of multivariate analysis, the most influential variables are found. in this study is the technical competency variable with an Exp B value of 1.003. The conclusion is that there is an influence between technical competence, efficiency and patient safety while the multivariate analysis shows that the most dominant factor is the variable of technical competence on family satisfaction. It is recommended that the hospital be able to improve the technical competence of nurses in the NICU room by holding training and workshops both internal and external training.

Introduction

The infant mortality rate is the first indicator in determining a child's health status. Newborns who have health problems contribute to the incidence of neonatal mortality. According to the Indonesian Health Demographic Survey (IDHS), the infant mortality rate has decreased from 46 per 1000 live births (IDHS, 2013) to 39 per 100,000 live births (IDHS, 2016). The main causes of neonatal mortality are neonatal asphyxia by 37%, prematurity 34%, sepsis 12%, hypothermia 7%, blood disorders 6%, post maturity 3% and congenital abnormalities by 1% (Ministry of Health of the Republic of Indonesia, 2017).

Neonatal Intensive Care Unit (NICU) is a care unit for newborns who require special care such as low birth weight, poor respiratory function, premature and babies who have difficulty in labor and show worrying signs in the first few days of life. Maintenance The NICU has an electronic monitor with life support systems, Buble Nasal Continuous Positive Airway Pressure (CPAP) or Mecanic Ventilator and other tools.

The care provided at the NICU is intensive so that during the treatment period, the role of the family is very limited, this is because treatment rooms such as the NICU with extra nursing services will restrict parents so that less effective communication will appear between babies and their parents, as well as families and nurses. to be limited. The care of Low Birth Weight (LBW) babies in the intensive room will have a very significant impact on parents such as fear, guilt, stress and anxiety about the baby's condition. Especially in the condition of the child who is being treated so critical that there will be a fear of losing the child.

Nursing babies in intensive care for parents is a crisis situation that results in experiences of stress, anxiety, depression and even posttraumatic stress. This happens because the parents are not psychologically ready to face the critical illness of their baby (Holditch-Davis et al., 2003; Cacciatore, 2013). Parents may be disappointed, and have feelings of guilt, failure, hopelessness, anger, helplessness, and loss of self-esteem. Sources of stress for parents start from separation from their newborn babies, inability to help, care for and care for babies, inability to protect babies from pain, use of technology and tools in intensive rooms and the baby's critical condition. Maternal needs related to nurse support in terms of sharing information and effective communication are the most important needs and the need for closeness to be involved in infant care is the most important need. Bialoskurski et al., 2002; Perry et al., 2017).

In fact, in the field of intervention carried out by medical personnel, it focuses more on handling baby health problems and does not pay attention to the psychological condition of parents. The condition of a baby that requires special care at the NICU makes parents, especially mothers, feel the loss because their baby is not being cared for by the mother. Parents actually want to always be close and side by side with their babies to find out any changes in the critical period their baby is experiencing and to do bonding attachments with their babies. However, because in the NICU there are restrictions on visiting hours, parents cannot enter to accompany their babies and they are only allowed to enter during visiting hours or when nurses and doctors need them. This often causes parental stress to increase so that parents are restless, tired, have no appetite, and experience sleep disturbances. All of these things are related to the needs of parents regarding support, comfort, information, certainty and closeness of babies undergoing care at the NICU.

Anxiety that lasts for a long time and is left untreated can threaten a person's physical or mental health. This is related to calm or a sense of security and comfort which then results in concentration problems (Das-Munshi et al., 2008; Apóstolo & Kolcaba, 2009). Parents who experience problems with concentration will find it difficult to make decisions about actions or procedures performed on their babies. The anxiety experienced by parents can be transferred to the baby so that it can worsen the disease and prolong the healing period.

The prevalence of patients treated in the Datu Beru Takengon Regional Public Hospital NICU Room (RSUD) in 2016 was 431 patients. In 2017, patients treated in the NICU Room at Datu Beru Takengon Hospital experienced a decrease of 397 then again decreased in 2018, namely as many as 386 patients, in 2019 there were 329 patients, while in 2020 the period from January to February was 63 people. Based on the initial survey conducted by the authors of 5 mothers whose babies were treated at the NICU, 2 people (40%) of them complained and felt stress and

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an increased sense of worry because of the long wait for the baby to be treated because the parents could not come in to accompany them. babies for a long time, they are only allowed to enter during visiting hours and if the nurse or doctor needs them. In this situation, mothers will show negative coping mechanisms to problems in their babies where there is a feeling of guilt because they have given birth to a baby in an abnormal condition, therefore guilt will continue to increase into feelings of fear, anxiety, stress and depression. They also said that they had no other choice but to care for the baby at the NICU at Datu Beru Takengon Hospital because that hospital was the only hospital that had NICU services.

Methods

This type of analytic survey research with a cross sectional study approach is to analyze the effect of technical competence, efficiency and patient safety on patient family satisfaction. The population in this study were all parents of babies who were treated in the NICU Care Room of the Datu Beru Takengon Regional General Hospital as many as 81 people with a total sample of 67 people. The tool for data collection is a questionnaire. The data that had been collected were processed using univariate and bivariate and multivariate analysis. Univariate analysis is to see an overview of the frequency distribution of all the variables studied, both the dependent variable and the independent variable. Bivariate analysis aims to see the relationship between the dependent variable and the independent variable and multivariate analysis to see the effect of the independent variable on the dependent variable with multiple logistic regression analysis in order to obtain the most dominant independent variable affecting the dependent variable.

Results and Discussion

Univariate Analysis

Based on table 1 regarding the distribution of respondent characteristics, technical competence, efficiency, patient safety and satisfaction, it shows that the most dominant respondents are those with age> 40 years, the most gender is women as many as 39 people (58%), the most dominant education of respondents is basic education as many as 38 people (56%). Based on the technical competence variable, it can be seen that the majority of respondents are in the bad technical competency category, namely 45 people (67.2%), based on the efficiency variable it can be seen that the majority of respondents are in the bad efficiency category, namely 46 people (68.7%), based on the patient safety variable It can be seen that the majority of respondents are in the bad patient safety category, namely 40 people (59.7%) and based on the family satisfaction variable it can be seen that the majority of respondents are in the unsatisfied category, namely 43 people (64.2%).

Table 1. Distribution of respondent characteristics, technical competence, efficiency, patient safety and satisfaction

Variable	N	Percentage
Age Group		
20- 30 Years	6	9
31 - 40 Years	28	42
> 40 Years	33	49
Sex		
Male	28	42
Female	39	58
Education		
Elementary	38	56
High School	21	32
Higher Education	8	12

Technical Competence			
Not Good		45	67.2
Good		22	32.8
Efficiency			
Not Good		46	68.7
Good		21	31.3
Patient Safety			
Not Good		40	59.7
Good		27	40.3
Family Satisfaction			
Not Satisfied		43	64.2
Satisfied		24	35.8

Bivariate Analysis

Based on table 2 regarding the relationship between technical competence, efficiency and patient safety with family satisfaction in the NICU treatment room at the Datu Beru Takengon Hospital, it shows that of the 45 respondents the majority answered that poor technical competence would make family satisfaction in the dissatisfied category, as many as 43 people (95.6%), of the 46 respondents the majority answered that poor efficiency would make family satisfaction in the dissatisfied category as many as 42 people (91.3%) and of the 40 respondents the majority answered that poor patient safety would make family satisfaction in the unsatisfied category as many as 35 people (87.5%).

Table 2. The Relationship between Technical Competence, Efficiency and Patient Safety with Family Satisfaction in the NICU Care Room at Datu Beru Takengon Hospital

Variable	Family Satisfaction				Total		P-Value	OR
	Not Satisfied		Satisfied		F	%		
	f	%	f	%				(95% CI)
Technical Competence								
Not Good	43	95.6	2	4.4	45	100	0,000	0,044
Good	0	0	22	100	22	100		(0,011-0,172)
Efficiency								
Not Good	42	91.3	4	8.7	46	100	0,000	0,091
Good	1	4.8	20	95.2	21	100		(0,036-0,234)
Patient Safety								
Not Good	35	87.5	5	12,5	40	100	0,000	0,178
Good	8	29,6	19	70,4	27	100		(0,075-0,418)

Multivariate Analysis

Table 3 about the model summary shows that the R value of 0.936 shows that the correlation between the dependent variable (Family Satisfaction) and the independent variable (Technical Competence, Patient Efficiency and Safety) is strong. R Square 0.877 means the independent variable (Technical Competence, Efficiency and Patient Safety) contributes to the influence of 87.70% on the dependent variable (Family Satisfaction). Based on table 4, the Annova test shows that the calculated F value obtained is 149,608 with a significance of 0,000. With a probability of 0.000 smaller than 0.05 (p = 0.05), then simultaneously (F test) there is an influence of the independent variables (Technical Competence, Patient Efficiency and Safety) on the dependent variable (Family Satisfaction). Based on table 5, the effect of technical competence, efficiency and patient safety on family satisfaction in the NICU nursing room at the Datu Beru Takengon Hospital shows that technical competence is obtained by a sig value

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of 0.000 <of p = 0.05; means that there is a significant influence of the variable technical competence with family satisfaction, for the efficiency variable obtained a sig value of 0.802> of p = 0.05; it means that there is no significant influence of the efficiency variable with family satisfaction and for the patient safety variable, the sig value is 0.440> from p = 0.05; means that there is no significant effect of the patient safety variable on family satisfaction.

Table 3. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the estimate
1	0,936[a]	0,877	0,871	0,173

a. Predictors : (Constant), Patient_ Safety, Efficiency, Technical_ Competence.
b. Dependent Variable: Family_ Satisfaction

Table 4. Anova

Model		Sum Of Squares	df	Mean Square	f	Sig
1	Regression	3,507	3	4,502	149.608	0,000[a]
	Residual	1,896	63	0,030		
	Total	5,403	66			

a. Predictors: (Constant), Patient_ Safety, Efficiency, Technical_ Competence.
b. Dependent Variable: Family_ Satisfaction

Table 5.The Influence of Technical Competence, Efficiency and Patient Safety on Family Satisfaction in the NICU Care Room at Datu Beru Takengon Hospital

Model	Unstandardzied Coefficient		Standardzied Coefficient		
	B	Std Error	Beta	t	Sig
1 (Constant)	0,052	0,028		1,860	0,068
Technical Competence,	1,003	0,113	0,982	6,871	0,000
Efficiency	-0,022	0,104	-0,022	-0,214	0,831
Patient Safety	-0,040	0,058	-0,042	-0,693	0,491

Technical Competence With Family Satisfaction

Nursing services are the largest component of the health care system as an integral part. Therefore, the nursing profession must be able to provide complete service, both in terms of quality and quantity. The large number of workloads creates burdens that have an impact on the emergence of stress with a number of unfavorable impacts, such as decreased job satisfaction, increased psychological and physical complaints. In general, this condition relates to demands for continuous and systematic maximum service (Manaf, 2019).

Technical competence concerns the skills and abilities of service providers. Of the 45 respondents the majority answered that poor technical competence would make family satisfaction in the dissatisfied category as many as 43 people (95.6%), the results of the Chi-Square statistical test analysis obtained p-value = 0.000 <α 0.05, which means There is an influence between technical competence and family satisfaction. The results of this study are in accordance with the research conducted by Herman et al., (2014) and Purwanti et al. (2017) research showing that there is a relationship between technical competence service quality and outpatient satisfaction.

Efficiency With Family Satisfaction

Efficiency is one aspect of the quality of health services, involving the efficient and effective use of all resources in the hospital from an economic and medical perspective. Based on the results of research on the relationship between efficiency and family satisfaction in the NICU care room at Datu Beru Takengon Hospital, it shows that of the 46 respondents the majority answered that poor efficiency will make family satisfaction in the bad category as many as 42 people (91.3%), Based on the results of the test analysis Chi-Square statistics obtained p-value = 0.000 <α 0.05, which means that there is a relationship between efficiency and family satisfaction. The results of this study are supported by a study entitled "Compilation of Indicators of Satisfaction of Inpatient Hospitals in Central Java Province. The results showed that around 68.6% to 76.24% of the patients were satisfied with the admission services, doctors, nurses, food, medicine, room and hospital facilities in general and services towards discharge. This study found 8 dimensions of service with 52 indicators: admission services (6 indicators), doctors (9 dimensions), nurses (9 indicators), food (6 indicators), medicines (7 indicators), hospital environment (6 indicators).), treatment room facilities (4 indicators) and outside services (5 indicators).

Patient Safety With Family Satisfaction

Patient safety in this aspect concerns patient safety and security. Client convenience, reduces the risk of injury, infection, side effects, or other hazards associated with service. Service safety involves officers and patients. Based on the results of research on the relationship between patient safety and family satisfaction in the NICU care room at Datu Beru Takengon Hospital, it shows that of the 40 respondents the majority answered that poor patient safety would make family satisfaction in the bad category as well as 35 people (87.5%) Based on the results of the Chi-Square statistical test analysis, the p-value = 0.000 <α 0.05, which means that there is a relationship between patient safety and family satisfaction. The results of this study are in line with the research conducted by Widiasari et al (2019) on Patient Satisfaction with the Application of Patient Safety in Hospitals. The results showed that there was a significant relationship between the implementation of safety by nurses and patient satisfaction. Patient satisfaction is greatly influenced by the attitude and approach of nurses in the hospital to patients, the quality of nursing services received by patients. The nurse's actions in this case are actions related to patient safety standards. 80.5% of the patient safety results have been carried out by nurses. Patient satisfaction as much as 66.4% influenced patient visits.

Effect of Technical Competence, Efficiency and Patient Safety with Family Satisfaction

One of the determinants of patient satisfaction is the quality of nursing services to the quality of health services, even being one of the factors determining the image of a health service institution in the eyes of the community. One indicator of the quality of nursing services is patient satisfaction. Patient satisfaction must always be maintained if the hospital wants to continue to exist in health services. The results of multivariate analysis from the table Based on table 4.16, the p value for the Technical Competence variable is 0,000, the p value for the Efficiency variable is 0.802 and the p value for the patient safety variable is 0.440 where the p value for the Technical Competence variable is <0.05 then Ho is accepted, which means Technical Competency variables have a significant effect on family satisfaction variables. While the p value for the efficiency and patient safety variables was obtained> 0.05, so Ho was rejected, which means that the efficiency and safety variables did not have a significant effect on the family satisfaction variable.

This is in accordance with the theory where technical competence is all things related to the skills, abilities, and appearance or performance of service providers. The technical competency dimension relates to how health service providers follow agreed health service standards which

include compliance, accuracy, correctness and consistency. The unfulfilled dimension of technical competence can result in a variety of things, from minor deviations to health service standards, to fatal errors that can reduce the quality of health services and endanger the lives of patients. for the efficiency dimension, it is the aspect related to cheap, efficient services, no overdiagnosis and therapy. Health services can be affected by the efficiency of health service resources. Efficient service will provide optimal attention rather than maximizing patient and community services. According to the assumption of the researcher, the patient, the patient's family, who feels that their expectations are not fulfilled do not want to come back to visit again and this can lead to a decrease in the number of consumers in a company / hospital and automatically hospital income can decrease. Patient discomfort is one of the things that encourages patients to go home before recovering, and is closely related to patient safety, where patients who feel safe and comfortable are a form of nursing service and care that is in accordance with standards and far from the risk of injury.

Conclusion

There is an influence between technical competence, efficiency and patient safety with family satisfaction in the NICU care room at Datu Beru Takengon Hospital.

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