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Knowledge The Use of Continous Positive Airway Pressure (Cpap) In Neonatus

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Abstract. CPAP maintains the positive pressure of the baby's airways during spontaneous, simple, and effective breathing. The use of CPAP decreases breathing difficulties, reduces dependence on oxygen, helps repair and maintains lung residual capacity, prevents upper airway obstruction and prevents lung collapse. The right use of CPAP can be reduces risk of complications on neonatus such as nasal injuries, pneumothoracs and gastric distension. The purpose of this study was to describe knowledge of CPAP usage on neonatus in the NICU room at Bekasi Hospital and Depok Hospital. Quantitative research methods, descriptive analytic design. A total sampling of 30 nurse respondents worked in the NICU room in Bekasi Hospital and Depok Hospital. Measuring instruments using a questionnaire. Statistical tests with Chi Square, Kendals Tau B and Kendals Tau C. The results of the majority of respondents aged 26-35 years 53.3%, Diploma of Nursing education 90%, working period between 1-5 years 40%, and those who have attended training 73 , 3%. There was no significant relationship between age (p = 0.136), education (p = 0.897), years of experience (p = 0.099), training (p = 0.322), knowledge (p = 0.284) with CPAP usage behaviour on neonatus. It is hoped that this research can improve nurses knowledge in caring for neonatus by using respiratory aids, CPAP by conducting continuous training to improve nurses behaviour in preventing complications.

Keyword: Neonatus, Knowledge, *ContinousPpositive Airway Pressure*

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1. Introduction

Neonatus are babies aged 0-28 days after birth (Hockenberry & Wilson, 2016). Neonatal mortality rate 19 per 1000 live births (Ministry of Health Republic of Indonesia, 2013; Indonesian Demographic and Health Survey (SDKI), 2012). Respiratory disorders are one of the causes of infant death that often occurs. To reduce the risk of death in newborns who experience respiratory distress is to provide continuous positive airway pressure (CPAP) therapy that is easier and more economical (Kawasa, 2014; Fisher and Paykel, 2013). The use of CPAP reduced the rate of use of mechanical ventilation from 12.3 to 11.8 per 1000 births and reduced the length of neonatal care in the NICU room (Robert, 2011). NICU is an intensive care unit for newborns with high risk that requires special care or action by using mechanical breathing aids,

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administering certain medicines with strict supervision from doctors continuously with the support of high-tech facilities (Ambarwati, 2014; Hallowell, et al, 2014). Some babies who use CPAP experience complications such as nose injuries. Erosion or injury to the nasal septum due to inappropriate use of nasal prong, or adhesions that are too tight so that it causes pressure sores and discomfort in neonatus due to the presence of nasal or prong masks attached to the nose (Walsh, 2015; Pattie, 2016).

Good nurses' skills and knowledge are needed to prevent and overcome complications due to the use of CPAP (Aziz, 2017). The purpose of this study was to determine the relationship of nurses' knowledge with the behaviour of CPAP use in neonatus in the NICU room at Bekasi Hospital and Depok Hospital.

2. Methods

Descriptive analysis design is used in this study where the researcher can objectively and systematically describe the independent variable and the dependent variable (Pamungkas, 2016). The population of this study were 30 nurses who worked in the NICU room at Bekasi Hospital and Depok Hospital. Samples were taken from two hospitals that have the same characteristics to meet the number of samples studied. Researchers used total sampling, in which a total of 30 nurses were employed in the NICU room at Bekasi Hospital and Depok Hospital. The time of the study was conducted from May to July 2018. Data collection methods or measuring instruments used in this study using questionnaires or questionnaires that have passed the test of validity and reliability (Sugiono, 2016; Notoatmodjo, 2010). Test the validity of the instrument measuring the knowledge of CPAP with a Cronbach alpha value of 0.943 and the measurement instrument for the use of CPAP behaviour with a Cronbach alpha value of 0.933. The statistical tests used in this study are Kendall's tau b, Kendall's tau c and Chi-square. Kendall's tau b formula is a non-parametric test that measures the strength and direct relationship of two variables on an ordinal scale (Sandjaja & Heriyanto, 2011).

3. Result

Table 1 Distribution of Characteristics of Respondents in the NICU Room

Characteristic		Frequency	Percentage (%)
Age	17-25	5	16.7
	26-35	16	53.3
	36-45	9	30.0
Education	Diploma of Nursing	27	90
	Bachelore of Nursing	3	10
Years of Experience	1-5 years	12	40
	6-10 years	9	30
	11-15 years	8	26,7
	16-20 years	1	3.3

Characteristic		Frequency	Percentage (%)
Training	No	8	26.7
	Yes	22	73.3
Knowledge	Low	0	0
	Moderate	9	30
	Good	21	70
Attitude	Not Good	9	30
	Good	21	70

Table 1 explains that the majority of respondents are the age of respondents in the age range 26-35 years as many as 16 respondents (53.3%), Diploma of Nursing education as many as 27 respondents (90%), working period 1-5 years as many as 12 respondents (40 %), who have attended CPAP training as many as 22 respondents (73.3%), respondents with good knowledge (score 76-100) are 21 respondents (70%) and have good behaviour in using CPAP with 21 categories (70%)).

Tabel 2 Relationship Between Age and CPAP Usage Behaviour in Neonatus in the NICU Room

Ages	Attitude				Totally		*P Value*
	Not Good		Good				
	F	%	F	%	F	%	
17-25 years	2	6.7	3	10	5	16.7	0.136
26-35 Years	6	20	10	33.3	16	53.3	
36-45 Years	1	3.3	8	26.7	9	30	
Totally	9	30	21	70	30	100	

Table 2 explains that respondents who had good behaviour at the age of 26-35 years were 10 respondents (33.3%) and respondents who had bad behaviour at age 26-35 years were 6 respondents (20%). Kendal's t test results between age and behaviour variables obtained P value of 0.136 (p> 0.05) concluded that there was no relationship between age and CPAP use behaviour in neonatus in NICU room Bekasi Hospital and Depok Hospital.

Table 3 Relationship of Education With CPAP Usage Behaviour in Neonatus in the NICU Room

Education	Attitude				Totally		*P Value*
	Not Good		Good				
	F	%	F	%	F	%	
Diploma of Nursing	8	26.7	19	63.3	27	90	0.897
Bachelor of Nursing	1	3.3	2	6.7	3	10	
Totally	9	30	21	70	30	100	

Table 3 explained that nurses who had good behaviour were 19 nurses (63.3%) were Diploma of Nursing educated, and nurses who had bad behaviour were 8 nurses (26.7%) were Diploma of Nursing educated. Kendal's test results know the relationship between education and nurse behaviour obtained p value of 0.897 (p> 0.05) concluded that there was no relationship between education and CPAP usage behaviour in neonatus in the NICU room Bekasi Hospital and Depok Hospital.

Table 4 Relationship of Tenure With CPAP Usage Behaviour in Neonatus in the NICU Room

Years of Work	Attitude				Totally		*P Value*
	Not Good		Good				
	F	%	F	%	F	%	
1-5 years	5	16.7	7	23.3	12	40	0.099
6-10 years	3	10	6	20	9	30	
11-15 years	1	3.3	7	23.3	8	26.7	
16-20 years	0	0	1	4.8	1	3.3	
Totally	9	30	21	70	30	100	

Table 4 explains that nurses who have 1-5 years of service and have good behaviour are 7 nurses (23.3%). Nurses with a work period of 11-15 years who had good behaviour were 7 nurses (23.3%). While nurses who have bad behaviour as many as 5 nurses (16.7%) are nurses with a service period of 1-5 years. Kendal's tau c test results between tenure and nurse's behaviour obtained p value of 0.099 (p <0.05) concluded that there was no relationship between tenure and CPAP usage behaviour in neonatus in the NICU room Bekasi Hospital and Depok Hospital.

Table 5. Relationship of Training With CPAP Usage Behaviour in Neonatus in the NICU Room

Training	Attitude				Totally		*P Value*
	Not Good		Good				
	F	%	F	%	F	%	
No	4	13.3	4	13.3	8	26.7	0.322
Yes	5	16.7	17	56.7	22	73.3	
Totally	9	30	21	70	30	100	

Table 5. explains that nurses who did not attend CPAP training with good behaviour were 4 nurses (13.3%). Nurses who attended training and had good behaviour were 17 nurses (56.7%). Chi square test results between training and nurse behaviour obtained p value of 0.322. P value > 0.05, it can be concluded that there is no relationship between training with CPAP usage behaviour in neonatus in the NICU room Bekasi Hospital and Depok Hospital.

Table 6. Relationship of Knowledge With CPAP Usage Behaviour in Neonatus in the NICU Room

Knowledge	Attitude				Totally		*P Value*
	Not Good		Good				
	F	%	F	%	F	%	
High	5	16.7	16	53.3	21	70	0.284
Moderate	4	13.3	5	16.7	9	30	
Low	0	0	0	0	0	0	
Totally	9	30	21	70	30	100	

Table 6. explains that respondents who have good knowledge and good behaviour are 16 respondents (53.3%). Respondents who have moderate knowledge and good behaviour are 5 nurses (16.7%). Kendal test results know c between knowledge and behaviour of nurses obtained p value of 0.284 (p> 0.05) concluded that there was no relationship between knowledge and CPAP usage behaviour in neonatus in NICU room Bekasi Hospital and Depok Hospital.

4. Discussion

The results of Relationship between age and CPAP usage behaviour in neonatus in the NICU room of this study are consistent with research by Hertati and Utami, 2018, the age of nurses with the most 26-35 years, not related to age with respondents' knowledge about developmental care in the NICU room. The majority of respondents at the age of 26-35 years have a mature psychological development, efficient work habits, have good feeling control and have a high sense of responsibility (Aziz, 2017). At that age someone has a high enthusiasm for work. Good behaviour in the use of CPAP is not only determined by age, many factors affect individuals behaving well, including awareness of responsibilities in their work, an environment that supports individuals behaving well (Notoatmodjo, 2014) such as the availability of adequate facilities or tools in neonatal care who use CPAP as well as the work habits of nurses in his room who are always compliant with the applicable standard operating procedures (SPO).

Relationship of education with CPAP usage behaviour in neonatus in the NICU room Nurse can affect the performance of the nurses concerned (Aziz, 2017). Nursing staff with higher education will perform better because they have broader knowledge and insight compared to nurses with lower education. Researchers concluded that good behaviour is not determined by education alone, many factors can influence individuals to have good behaviour (Wawan & Dewi, 2014). Higher education alone without continued training will not make individuals behave well (Hertati & Utami, 2018). Individual skills will not develop without regular training. Regular training and a high sense of responsibility will shape the individual to have good behaviour in caring for neonatus using CPAP.

The period of work is a period of time or duration of labor, working in a place. Working period is one of the things that can affect one's ability to think and act. The longer the work period of a person, the more and more mature the experience he has. Good behaviour is not only

determined by years of service but is shaped by various factors such as education, training that is often followed, availability of adequate facilities or tools in the care of neonatus who use CPAP (McAdams, 2015; Tagare, 2013). Regular training will improve nurses' skills and form good behavior.

Training is a learning process in the form of techniques and certain methods to improve one's work skills and abilities in a directed manner. Continuous training is important to improve skills and improve good behaviour. This study found that there was no relationship between training with CPAP usage behaviour in neonatus. According to researchers, good behaviour in using CPAP is not absolutely due to having attended training, but it could be caused by other factors such as having a sense of empathy and high individual awareness of good care behaviour in neonatus with CPAP attached, and also a high sense of responsibility towards his work.

Knowledge is the result of knowing and this happens after someone has sensed a certain object. Knowledge is the dominant factor in achieving certain skill levels (Ahmed, 2015; Hammod, 2016). Knowledge is the main asset to get good skills. The higher the knowledge a person has will produce good behaviour. Good behaviour on respondents is not absolutely caused by good knowledge factors, but can be caused by other factors that also affect respondent knowledge (Yi Chen, 2016; Hamza, 2017). Of course nurses with good knowledge will seek information either through training or the media about the use of CPAP so that eventually the nurse has good behaviour in the use of CPAP in the NICU room.

5. Conclusion and Suggestions

Statistical test results showed that there was no relationship of knowledge with CPAP usage behaviour in neonatus in the NICU room of Bekasi Hospital and Depok Hospital with a value of p = 0.284. Researchers feel there is no relationship between nurses 'knowledge with CPAP usage behaviour due to the small number of samples used in this study, so the results of research on the relationship of nurses' knowledge with CPAP usage behaviour in neonatus cannot be described. Good behaviour on respondents is not absolutely caused by good knowledge factors, but can be caused by other factors that also affect respondents' knowledge, for example information from print and electronic media. Researcher's suggestion is to increase nurses 'knowledge in treating neonatus by using respiratory aids, CPAP by conducting continuous training to improve nurses' behaviour in preventing complications such as nose injuries. Researchers further conducted research on nurses' behaviour in the use of nasal prong in neonatus who were treated using CPAP devices in the NICU room related to the incidence of complications from nasal injuries. This research certainly still has limitations, the scope of the research is limited and the characteristics of respondents are homogeneous. So that it cannot describe more broadly about the behaviour of CPAP use and the dependent variable in this study is still limited only to behaviour alone does not describe broader behaviours such as

behaviours that cause complications and complications prevention behaviours from CPAP use. Further research should be able to conduct research with clear behavioural variables in the use of CPAP, with a greater number of respondents.

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