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The Correlation Between Knowledge Level and Maternal Anxiety in Neonatal Asphyxia at Banyumas Regional Public Hospital

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ABSTRACT

Background: Neonatal asphyxia refers to condition newborn baby experiences lack of oxygen, leading to brain damage or even death. There are several factors that make asphyxia babies experience respiratory failure, labor factors which include prolonged labor, actions such as vacuum extraction, forceps extraction and sectiocaesarea. that can be also be caused by birth depression, infections and drugs used during labour. Based on the background above, the problem formulation in this research is :What is the relationship between the level of knowledge of mothers of babies born with Asphyxia Neonatorum? How do mothers worry about babies born with Asphyxia Neonatorum?It is hoped that it can educate pregnant women about the health of their unborn babies and carry out various positive activities to provide health services and health education to pregnant women about baby asphyxia, especially community health centers which play an active role in examining pregnant women. Method: This study quantitative research design with a questionnaire. The research design used analytical survey using cross-sectional. Data analysis univariate and bivariate analysis using the spearman correlation. The sample 30 mothers of infants with asphyxia at Banyumas Regional Hospital, selected through simple random sampling from june-july 2023. The research include knowledge level (Guttman Scale) and anxiety (Likkert Scale). The Cronbach's reliability (0,6). The reliability knowledge level 0.829, indicating good reliability. Results:The correlation analysis of 0.575, with significant p-value of 0.001, indicating sginificant correlation between knowledge level and maternal anxiety in neonatal asphyxia. Conclusion:There is significant correlation between knowledge level and maternal anxiety in neonatal asphyxia.

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1. INTRODUCTION

Neonatal asphyxia refers to condition newborn baby experiences lack of oxygen, leading to brain damage or even death. There are several factors that make asphyxia babies experience respiratory failure, labor factors which include prolonged, actions such as vacuum extraction, forceps extraction and sectiocaesarea.that can be also caused by birth depression, infections and drugs used during labour. Asphyxia is caused by several factors including the condition of the mother, the condition of the baby, the placenta, neonates and child birth.

First maternal condition factors, including education, pregnancy hypertension (preclampsia and eclampsia), anemia, antepartum bleeding (placenta previa and placenta labruption), Chronic Energy Deficiency (CED), severe in fections, and post date pregnancy.
Second as pectsof the baby's condition, including prematurity, LBW, congenital problems, andamniotic fluid mixed with feces.
Third a spect soft hepla centa,including coile dumbilical cord, short umbilical cord, umbilical cord knot, umbilical cord prolapse.
Fourth Neonatal aspects, including respiratory distress due to analgesic or anesthetic drugs given tothe mother, and labor depression such as intracranial bleeding.
Fiftha spect soflabor, including prolonge dorob structed labor, labor through complications (breech position, twins, should erdystocia, vacuum extraction, forceps) and Premature Rupture of Membranes (PROM).

Asphyxia conditions can be come serious if the baby's careis not carried out properly. Where the impact can cause a reduction in quality of life, as a decrease in the supply of O2 to part soft he brain can make it difficult for brain grow which will continue to encourage the baby's intelligence[1]
Based on the background above, the problem formulation in this research is:
1. What is the relationship between the level of knowledge of mothers of babies born with Asphyxia Neonatorum?
2. How do mothers worry about babies born with Asphyxia Neonatorum?
It is hoped that it can educate pregnant women about the health of their unborn babies and carry out various positive activities to provide health services and health education to pregnant women about baby asphyxia, especially community health centers which play an active role in examining pregnant women.

2. RESULT AND DISCUSSIONS

The research was conducted on June 12 - July 3 2023 at the Banyumas Hospital for mothers who gave birth to children with Asphyxia Neonatorum with a total sample of 30 respondents. This study aims to determine the relationship between the level of knowledge and the anxiety of mothers about babies with Asphyxia Neonatorum at Banyumas Hospital. This research method uses quantitative research with questionnaires. Analytical survey research design uses a cross sectional approach in which risky or problematic variables formed in the research object are estimated or focused together. From this research, the following results were obtained:

2.1. Respondent Characteristics

Table 1. Frequency Distribution of Respondent Characteristics (n= 30)

Respondent Characteristics	Frequency (f)	Percentage (%)
Age of Asphyxia Infant Mother		
<20 years or >35 years (At risk)	25	83,3
20 years or 35 years (No Risk)	5	16,7
Gestational Age		
< 37 Weeks (Pregnancy)	13	43,3
> 37 Weeks (Enough Months)	17	56,7
Education		
Elementary School – Junior High School (low)	4	13,3
Senior High School (high)	21	70,0
College University (high)	5	16,7
Blood pressure		
< 110/70 mmHg (low)	11	36,7
110/70 – 120/80 mmHg (Normal)	10	33,3
> 120/80 mmHg (high)	9	30,0
HB		
>11g/dl (normal)	7	23,3
<11g/dl (anemia)	23	76,7
upper arm circumference		
>23,5 CM (normal)	20	66,7
<23,5 CM (susceptibel)	10	33,3

Based on table 1.1,In the age distribution of mothers of asphyxiated babies, most mothers were aged 17 - 21 years. Women aged 17-21 years are the risk age for pregnancy and childbirth from a health perspective because the uterus and pelvis have not developed properly, and the mother's age <20 years is in the non-reproductive category. This is in line with research evidence from large-scale studies[2], explaining that the incidence rate is higher based on babies born to mothers < 20 years old who are giving birth for the first time (0.9,

95% CI, 0.8–1.0) compared to babies born to mothers who had given birth previously (0.6, 95% CI, 0.5–0.6). With the result p value <0.05.

The distribution of gestational age is in line with research [3], explaining that the results of research on factors related to the occurrence of neonatal asphyxia in premature / gestational age babies were mostly 128 respondents (77.6%) in 2010, 190 respondents (87.2%) %) in 2011, and 112 respondents (84.9%) in 2012 with a p value of 0.000 and the incidence of severe neonatal asphyxia was 25 respondents (58.1%) and the incidence of moderate neonatal asphyxia was 103 respondents (84.4%).

In terms of education distribution, the majority were high school, numbering 21 respondents (70.0%). Based on research [4], it is explained that the level of education influences the patient's level of knowledge and understanding regarding their illness, the higher the education, the more likely they are to understand and understand more about the illness they are suffering from.

In the blood pressure distribution, the majority were <110/70 mmHg, 11 respondents (36.7%). Hypertension can cause vasoconstriction of blood vessels which results in a lack of blood supply to the placenta resulting in fetal hypoxia. The next consequence of fetal hypoxia is disruption of gas exchange between oxygen and carbon dioxide, resulting in neonatal asphyxia. Newborn lung development occurs in the first minutes, followed by regular breathing and the baby's crying. This is in line with research [5], explaining that the research results of factors related to the incidence of neonatal asphyxia in hypertension / blood pressure < 140/90 mmHg were mostly 147 respondents (89.1%) in 2010, 187 respondents (85 .78%) in 2011, and 109 respondents (82.58%) in 2012. In the distribution of blood pressure, the majority of mothers had blood pressure <110/70 mmHg.

In the distribution of Hemoglobin based on research [6] the prevalence of maternal anemia was 84.84% of 4473 cases. The anemia group was 15.16% non-existent, mild 40.73%, and moderate 40.73%, compared to the severe anemia group (24.93%). Maternal occupation, educational status, and Hb levels were significantly associated with anemia with results of p (< 0.001) unlike parity, body mass index, and mode of delivery. Premature delivery of neonates, birth weight and length, small for gestational age, Apgar scores, respiratory distress, and high mortality rates were strongly associated with maternal anemia with a p value (<0.001) in contrast to septicemia, birth asphyxia, and hypoglycemia, regardless of level. higher frequency in the anemia group.

In the LILA distribution, it is in line with research [7] which showed that 21 women gave birth with the characteristics of KEK, 5 people were born with LBW (23.8%) and 16 people were born without LBW (76.2%). Meanwhile, 81 women gave birth with a history of not having CED, 5 people gave birth with LBW (6.2%) and 76 people gave birth without LBW (93.8%). The results of the Fisher's Exact Test show a ρ value < 0.05 and a ρ value of 0.029, so it can be concluded that there is a significant relationship between KEK in pregnant women and the incidence of LBW at the Pecatu Community Health Center in 2020.

2.2 Knowledge Level of Mothers of Asphyxia Neonatorum Babies

Table 2. Distribution of Knowledge Level so Mothers of Asphyxia Neonatorum Infants

Knowledge level	Frequency (f)	Percentage (%)
Good	2	6,7
Enough	10	33,3
Not enough	4	13,3
Very less	14	46,7

The level of knowledge of mothers of neonatorum aphyxia babies at Banyumas District Hospital was mostly in the very poor category with 14 respondents (46.7%) and the lowest score was 3 (17%) with 3 respondents out of 30 respondents. According to studies, knowledge is the result of the word "know" and this occurs after someone senses a certain object. Sensing occurs through the five human senses, namely the sense of sight, the sense of hearing, the sense of smell, the sense of taste, and finally the sense of touch.

This is in line with research [8], explaining that there is a relationship between the level of knowledge and the level of anxiety of mothers of babies being treated in the perinatology room at RSUD DR. M. ZEIN PAINAN, the level of education has an influence on the mother's knowledge, a person who has a good and broad level of knowledge will have a higher level of education, a mother with a low level of knowledge will have narrow insight into various things, so the mother does not know much information about the problems being faced. In this study, more than half of the respondents had a medium level of knowledge, namely 61.1%.

2.3. Anxiety Level of Mothers with Asphyxia Neonatorum Babies

Table 3. Distribution of Anxiety Levels of Mothers of Asphyxia Neonatorum Babies

Anxiety Level	Frequency (f)	Percentage (%)
Normal	2	6,7

Mild Anxiety	5	16,7
Moderate Anxiety	2	6,7
Severe Anxiety	21	70,0

The anxiety faced by mothers of asphyxia neonatorum babies shows that they have severe anxiety according to the questionnaire distributed with the results mostly being in the severe anxiety category as many as 21 respondents (70.0%). This is in line with research [9], explaining that in this research results were obtained from 36 respondents, namely 69.4% (25 respondents) had a moderate level of anxiety in mothers of babies treated in the perinatology room at Dr. RSUD. M. Zein Painan in 2019.

2.4. Analysis of the Relationship between the Level of Knowledge and the Anxiety of the Mother of Asphyxia Neonatorum Infants

Table 4. Correlation between Knowledge Level and Anxiety of Mothers of Asphyxia Neonatorum Infants

			knowledge level	Anxiety
Spearman's rho	knowledge level	Correlation Coefficient	1,000	,575**
		Sig. (2-tailed)	.	,001
		N	30	30
	Anxiety	Correlation Coefficient	,575**	1,000
		Sig. (2-tailed)	,001	.
		N	30	30

The relationship between the level of knowledge and maternal anxiety about neonatal asphyxia at Banyumas District Hospital was found to be a correlation of 0.575 (strong correlation) and there was significance between variables with a p value of 0.001. This is in line with research[10]. explained that there was a significant relationship between knowledge and anxiety of postpartum mothers in caring for newborns with a value of p = 0.000 < α = 0.05 with X2 calculated = 22.297. Postpartum mothers should increase their knowledge about caring for newborns and increase mental and physical readiness to prevent anxiety in postpartum mothers. Different things were stated in research [11], explaining that the anxiety level of parents of LBW babies is generally moderate to severe (70%). Analysis of factors related to the level of anxiety of parents of LBW babies.

3. CONCLUSION AND RECOMMENDATION

Based on the results of the research and discussion above, it can be concluded as follows:

First this study has the characteristics of respondents based on the age of the mother of the asphyxia baby, gestational age, education, HB, upper arm circum ference, and TD. Based on the age of pregnant women 17 - 21 years as many as 14 respondents, gestational age > 37 weeks as many as 17 respondents, high school education as many as 21 respondents, BP < 110/70 mmHg in 11 respondents, HB <11 g/dl in 23 respondents, and upper arm circum ference > 23.5 CM in 20 respondents.

Second the level of knowledge of mothers of neonatorum aphyxia babies at Banyumas District Hospital was mostly in the very poor category with 14 respondents and the lowest score was 3, with 3 respondents out of 30 respondents.

Third the anxiety level of mothers of asphyxia neonatorum babies at the Banyumas District Hospital was mostly in the severe anxiety category with 21 respondents and a severe anxiety score of 69 was obtained, 1 respondent out of 30 respondents.

Fourth there is a relationship between the level of knowledge and the anxiety of mothers of babies with neonatal asphyxia at the Banyumas District Hospital with a correlation result of 0.575 (strong correlation) and there is significance between variables with a p value of 0.001.

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