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Internal Factors Risk of Breastfeeding Failure in Infants Age 3-6 Months

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ABSTRACT

Background: The coverage of breastfeeding in Indonesia has not yet met the target set by the government. Mothers' awareness of breastfeeding in Indonesia is only 14% and is only given until the baby is four months old. Based on these data, there are ± 86% of mothers who experience exclusive breastfeeding failure, or we can say there are 86% of mothers who give additional food/drinks other than breast milk to their babies before the age of 6 months
Objective: To determine the internal factors that cause the risk of breastfeeding failure in infants 3-6 months old.
Method: the method used in this study was the analytic study with *a case-control approach*. The Sampling uses a purposive sampling technique with a sample size of 10 respondents in the case group and 10 respondents in the control group. Statistical test using fisher exact test and odds ratio.
Results: Internal factors that become the risk of breastfeeding failure in infants 3-6 months are occupation (OR = 16.00), parity (OR = 2.25), and mother's knowledge (OR = 21.00). While the internal factors of age, education, nutritional status, and condition of the mother have a low risk for the failure of breastfeeding for infants 3-6 months.
Conclusion: Efforts to increase knowledge are needed such as education and counseling. It is hoped that there will be a lactation counselor in increasing the coverage of breastfeeding.

Keywords: ***Breastfeeding, Failure, Internal Factors, Breastfeeding Mothers, Babies***

INTRODUCTION

Breastfeeding is one of the most powerful influences on a child's survival in growth and development and can reduce child mortality. The findings by 42 countries show that breastfeeding is associated with a reduction in child mortality, where exclusive breastfeeding has the greatest impact on reducing under-five mortality, which is 13%, compared to other health interventions. This figure can increase to 22% when breastfeeding begins in the first 1 hour after birth [1,2].

Mother's Milk (ASI) is the perfect and best food for babies because it contains the nutritional elements needed by babies for optimal growth and development of babies. Breast milk

contains more than 2000 various basic elements, including egg whites, fats, carbohydrates, vitamins, minerals, growth factors, hormones, enzymes, immune substances, and white blood cell substances. All these substances are present in proportion and balance in breast milk, moreover, the presence of colostrum in breast milk acts as a protective antioxidant-rich infection, protein-rich, and ideal laxative to eliminate unused baby intestine substances and prepared digest food for children to make food for the future[3]. Starting from There is no doubt that breast milk is the best food for babies, so considerable effort is needed to promote exclusive breastfeeding, including all aspects of maternal awareness, and the role of the family and society and medical services.

The current situation in the field in terms of exclusive breastfeeding/breastfeeding without additional food or fluids to newborns up to the age of 6 months has not received the number according to the expected target. In Indonesia, it was reported in 2015 that the coverage of exclusive breastfeeding was only 55.7% and was still far from the target set by the government in 2010 which was the coverage of exclusive breastfeeding of 80%. Exclusive breastfeeding coverage in South Sulawesi recorded only 38.5% in 2016, down from coverage in 2015 of 71.5% [4,5].

UNICEF data in 2006 states that maternal awareness of breastfeeding in Indonesia is only 14%, and is only given until the baby is four months old. Based on these data, there are ± 86% of mothers who experience exclusive breastfeeding failure, or we can say that there are 86% of mothers who give additional food/drinks other than breast milk to their babies before the age of 6 months [6]. The low level of breastfeeding in the family is one of the causes of malnutrition in infants and toddlers. National data from 2005 states that there are around 27.5 % under five with malnutrition and 110 districts or cities with a prevalence of malnutrition (including malnutrition) above 30%, according to WHO is classified as very high. This condition is very worrying, right, because it threatens the quality of our human resources in the future [7].

Based on the data above, the success of breastfeeding has not reached the specified target so that thought and attention are needed to finding breakthrough efforts and concrete actions that must be taken by providers in the health sector and community components, including research that is expected to provide input in increasing targets. coverage of breastfeeding. Therefore, researchers are interested in conducting research on internal risk factors for breastfeeding failure in infants aged 3-6 months.

METHODS

This research was conducted in February-August 2020 in the working area of the Taraweang Health Center, Pangkep Regency, South Sulawesi. The research method used is an analytic study with a *case-control approach* to analyze internal factors on the risk of breastfeeding failure and in this research design, there is no *unmatching* in cases and controls [8].

The population used in this study were mothers who had babies aged 3-6 months as many as 46 people. The number of samples used was 20 respondents with *a purposive sampling technique*. The sample will be divided into 2 groups, namely the case group (mothers who fail to breastfeed their babies for at least 90 days/3 months) as many as 10 respondents and the control group (mothers who successfully breastfeed their babies for at least 90 days/3 months) with 10 respondents.

In determining the sample, the researcher applies the inclusion and exclusion criteria as follows:

1. Inclusion criteria
   a. Case group: mothers who fail to breastfeed their babies for at least 90 days (3 months) after giving birth and a history of childbirth in health facilities at the hospital/Puskesmas/RB
   b. Control group: mothers who successfully breastfeed their babies for at least 90 days (3 months) after giving birth and have a history of childbirth in health facilities at the hospital/Puskesmas/RB
   c. Mothers who have babies aged 3-6 months
2. Exclusion criteria
   a. Mothers with contraindications to breastfeeding
   b. Mothers with BBL history >2500gram
   c. Mothers with a history of BBL problems

The dependent variable in this study is breastfeeding with the criteria for failing to breastfeed for 3 months and the criteria for successfully breastfeeding for 3 months, while the independent variables are internal factors in the mother, namely age, education, occupation, parity, nutritional status, mother's condition and knowledge.

Data collection techniques using a questionnaire with open interviews for each respondent. Data analysis is in the form of univariate analysis, namely the data obtained from each variable is entered into the frequency variable. Furthermore, a bivariate analysis was carried out, namely to determine or test the relationship between the independent variable and the dependent variable using *the Fisher extract test* and the risk (*odds ratio*) of case exposure.

RESULT

1. Univariate Analysis

The results of the univariate analysis of internal factors or characteristics of respondents analyzed in this study are age, education, occupation, parity, nutritional status, mother's condition and knowledge can be seen in table 1.

From table 1 it can be explained that most of the respondents have a non-risk age between 20-35 years as many as 12 respondents (60%), most of the mothers have low education from junior high school to elementary school as many as 14 respondents (70%) and the average working mother and housewives each with 10 respondents (50%), as well as parity mothers, namely primipara and multipara, each with 10 respondents (50%). Most of the mothers had normal nutritional status as many as 15 respondents (75%). The mother's condition 0-6 months after giving birth, most of the mothers were in good health, namely 15 respondents (75%) and some mothers' knowledge about breastfeeding was on average enough, namely 12 respondents (60%).

Tabel 1. Frequency Distribution of Respondents Characteristics (n = 20)

Characteristics	***f***	**%**
Age		
No Risk (20-35 year's)	12	60
at risk (<20 and >35 years)	8	40
Education		
Tall (SMA-S1)	6	30
Low (not school-SMP)	14	70
Profession		
Does not work	10	50
Work	10	50
Parity		
Primipara	10	50
Multipara	10	50
Nutritional status		
Normal	15	75
Not enough	5	25
Mother's Condition		
Healthy	15	75
Sick	5	25
Knowledge		
Well	8	40
Enough	12	60

2. Bivariate Analysis

Bivariate analysis aims to determine the relationship between the independent variable and the dependent variable, using the *Fisher extract test*. This analysis is also to see the relationship between risk factors and the failure of breastfeeding for three months as indicated by the value of < 0.05 and the OR value > 1, namely the internal factors in table 2.

Table 2. Relationship of Internal Factors with Failure to Breastfeed for 3 Months

Variable	Breastfeeding				Total		OR
	Control		Case				
	n	%	n	%	N	%	
Age							
No Risk	4	33.3	8	66.7	12	100	
at risk	6	75	2	25	8	100	0.17
Total	10	50	10	50	20	100	0.167
Education							
Tall	2	33.3	4	66.7	6	100	
Low	8	57.1	6	42.9	14	100	0.628
Total	10	50	10	50	20	100	0.0375
Profession							
Does not work	8	80	2	20	10	100	
Work	2	20	8	80	10	100	0.023
Total	10	50	10	50	20	100	16.00
parity							
Primipara	6	60	4	40	10	100	
Multipara	4	40	6	60	10	100	0.656
Total	10	50	10	50	20	100	2.25
Nutritional status							
Normal	7	46.7	8	53.3	15	100	
Not enough	3	60	2	40	5	100	1,000
Total	10	50	10	50	20	100	0.583
Mother's Condition							
Healthy	7	46.7	8	53.3	15	100	
Sick	3	60	2	40	5	100	1,000
Total	10	50	10	50	20	100	0.583
Knowledge							
Well	7	87.5	1	12.5	8	100	
Enough	3	25	9	75	12	100	0.020
Total	10	50	10	50	20	100	21.00

Table 2 shows that the internal factors, namely age, education, parity, nutritional status and maternal condition, showed no significant relationship with the failure of breastfeeding for 3 months. While the internal factors of knowledge and work showed a significant relationship with the failure of breastfeeding for 3 months. However, the factors that cause the failure of breastfeeding for 3 months are work, parity and knowledge.

DISCUSSION

Most of the respondents aged mothers who were not at risk (20-35 years) who failed to breastfeed their babies for 3 months were 8 people, while the age of mothers who were at risk (>20 years and <35 years) who failed to breastfeed their babies for 3 months. month as many as 2 people. Based on the fisher's test results, there is no significant relationship between maternal age and breastfeeding failure for 3 months (ρ = 0.17) and has a low risk of 0.167. In this case, it can be concluded that mothers aged 20-35 years are more likely not to breastfeed, while mothers aged >20 years and <35 years are more likely to breastfeed.

This is in line with several studies which show that there is no relationship between maternal age and breastfeeding for infants. This is because most of the respondents are at an age that is not at risk or of a healthy reproductive age for women, namely the age of 20-35 years, and have good lactation abilities when compared to mothers who are >35 years old, while mothers with an age of <20 years have a psychological condition that is not ready to become a mother compared to mothers at the age of reproduction [9–11]. In this study, the thing that causes maternal age to have a low risk of breastfeeding failure for 3 months is the experience and knowledge of the mother, respondents at-risk age are dominated by mothers aged >35 years who have had several children so that they do exclusive breastfeeding for their babies. In addition, the promotion of formula milk which has

been intensively carried out by various parties and the media has become a stimulus for young mothers to choose to give formula milk over breast milk [12,13].

A person's formal education can affect a person's level of knowledge, education will make a person's curiosity higher. High education will make someone more able to think rationally about breastfeeding and easier to get information compared to someone with low education [12,14]. However, this is not in line with the results of the study which showed that there was no significant relationship between education and breastfeeding for 3 months and the risk of failure to breastfeed for 3 months was very low at 0.0375x.

This is because mothers with high education have the opportunity to get jobs outside the home. Working mothers always face obstacles in breastfeeding their babies due to limited time and short leave. So the results of this study indicate that there is a significant relationship between work and breastfeeding for 3 months.

Work is one of the risk factors for the failure of breastfeeding for 3 months, which is 16 times more risk of failure in working mothers. This is in line with several studies conducted which state that working mothers tend not to be successful in giving exclusive breastfeeding to their babies due to time constraints and feeling troubled by bringing their children to work [9,10,12,15].

Parity is the number of children born to a mother [16]. Parity is closely related to experience in parenting both in parenting, breastfeeding, and nutritional fulfillment. Parity is related to information seeking with information seeking for mothers breastfeeding. For multiparous parities, experience in breastfeeding is an irreplaceable advantage, while parity with primiparas requires preparation both physically and psychologically from the beginning of pregnancy, knowledge of early initiation of breastfeeding and breastfeeding, and how to get a good intake until the puerperium [17,18].

The results showed that there was no relationship between parity and breastfeeding for 3 months, but parity was one of the risk factors for the failure of breastfeeding for 3 months, which was 2.25x riskier for failure in primiparous parity.

The better the nutritional status of the mother eats, the better the mother gives exclusive breastfeeding. The nutritional status of the mother will affect the volume and composition of breast milk, so balanced nutrition is needed for the needs of mothers and babies to be fulfilled properly. On the other hand, mothers with malnutrition problems can still produce breast milk, but long-term nutritional deficiencies can affect some of the nutrients contained in breast milk. The number of immune components in breast milk will also decrease along with the deteriorating nutritional status of the mother. Energy for breastfeeding mothers who are less than 1500 calories per day can reduce total fat intake and change fatty acid patterns.

The results showed that there was no relationship between nutritional status and breastfeeding for 3 months and had a low risk of failure to breastfeed for 3 months, which was only 0.583x. This is due to inadequate breastfeeding (PKA). About 50% of mothers stop breastfeeding completely a few weeks after giving birth because they feel they are not producing enough milk and the baby is not satisfied.

PKA is a mother's perception or self-assessment that breast milk is not sufficient to meet the needs of her baby that mothers with good nutritional status during pregnancy sometimes do not breastfeed their babies because they feel that their children are not happy with breastfeeding so they give other foods or drinks to babies [19–21].

In addition, the frequency and duration of breastfeeding greatly affect milk production. The frequency and

duration of breastfeeding in this study varied greatly. All infants were breastfed > 7 times/day for > 10 minutes at each feeding. Frequent breastfeeding stimulates more milk production, even in mothers with less than optimal milk production. This stimulation will affect the increase in the hormones prolactin and oxytocin which are involved in the production and consumption of breast milk so that the amount of milk released can meet the needs of the baby [22,23].

Health problems in breastfeeding mothers cause mothers to doubt whether they can breastfeed, a condition that will eventually lead to exclusive breastfeeding or not. The health problem that mothers often face when breastfeeding is swollen breasts. Breast engorgement is caused by mild swelling/edema caused by blood vessels or lymphatic blockage caused by a buildup of milk in the breast. The accumulation of milk in the breast is caused by the baby not sucking strongly, the position on the breast is not right, so the breastfeeding process is wrong, and the nipples are flat or sunken [10,24].

The results showed that there was no significant relationship between the condition of the mother and breastfeeding for 3 months and the factor of the mother's condition was very low, the risk of breastfeeding failure for 3 months was very low. This is in contrast to the results of research conducted by Atabik (2014) which states that there is a relationship between maternal health conditions and the practice of exclusive breastfeeding [10]. The factor that distinguishes the results of the study is the number of mothers who are unable to overcome health problems, thereby reducing the desire to give breast milk to their babies.

Knowledge is the result of knowing and it occurs after someone senses a certain object. Sensing occurs through the human senses, namely sight, hearing, smell, feeling, and touch. Knowledge (cognitive) is a very important domain in shaping one's actions. Based on experience and research, it is proven that behavior based on knowledge will be wider than behavior that is not based on knowledge [16,25].

An act that is based on knowledge will be more lasting than an act that is not based on knowledge and the person who performs the act or action in himself will form an awareness process, namely, the person will realize the meaning of knowing in advance the object (stimulus) that is about breastfeeding, then feel attracted to the stimulus. , assessing whether or not knowing about the benefits of breastfeeding for babies and themselves, the subject begins to take actions that are by his knowledge, namely breastfeeding his baby (trial), so that adoption occurs, namely where the subject behaves according to the knowledge he has [26,27].

Therefore, knowledge is one of the risk factors for the failure of breastfeeding for 3 months, which is 21 times the risk of failure if the mother has sufficient education.

CONCLUSION

Internal factors that become the risk of breastfeeding failure in infants 3-6 months are occupation (OR = 16.00), parity (OR = 2.25) and mother's knowledge (OR = 21.00). While the internal factors of age, education, nutritional status and condition of the mother have a low risk for the failure of breastfeeding for infants 3-6 months.

Efforts to increase knowledge are needed such as education and counseling. It is hoped that there will be a lactation counselor in increasing the coverage of breastfeeding. The researcher hopes that there will be more in-depth research on this by analyzing the bias in each variable.

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