



RESEARCH ARTICLE

ANALYSIS OF THE SUCCESS FACTOR OF BABY PREMATURE CARE

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ABSTRACT

The high mortality rate for neonatal and premature babies shows that the handling of babies is still rushed. So we need activities to save premature babies from sudden infant death syndrome. This treatment needs to be done from the hospital to the home. This is done until vital organs such as the brain, lungs and heart can function optimally. Premature babies have worse adaptability than term babies. This study aims to analyze the factors that contribute to the success of premature baby care. This research method is observational analytic. Population: mothers who have babies with a history of preterm labor in 2018 totaling 28 respondents. The sampling technique is purposive sampling. The analysis test used in this study is multiple logistic regression. Results: Most of the respondents were aged 20-35 years by 78%, most respondents' education was Primary and Secondary Education by 58%; all respondents housewives by 100%; the parity of respondents is mostly multi gravida at 86%; knowledge of respondents is good at 50%; a history of premature delivery by 93%. Most respondents were positive about the care of premature babies. Baby care methods that use skin contact and who use the same incubator, amounting to 50%. The success of premature baby care for some respondents succeeded in treating premature babies by 64%, which was marked by an increase in body weight of more than 500 grams per month. There is an influence between the history of premature childbirth, knowledge and methods of caring for premature babies on the success of preterm baby care

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INTRODUCTION

Premature birth is a birth that takes place at 20-37 weeks' gestation, calculated from the first day of the last menstruation. Premature birth is an important issue in the field of human reproduction, for both developed and developing countries, such as Indonesia. Perinatal mortality rate is an indicator of the degree of the health of a country's society. 70% of perinatal deaths are caused by preterm labor. Premature birth rates ranged from 10-20% in Indonesia in 2009. This figure makes Indonesia ranked fifth with the largest preterm birth. Based on data from the Indonesian Health Demographic Survey (IDHS) there was a decrease in the IMR (Infant Mortality Rate) in 1991 (68 per 1,000 live births), compared to 2007 (34 per 1,000 live births). This figure is still far from the Millennium Development Goals (MDGs) target in 2015 of 23 per 1,000 live births. Expanding Maternal and Neonatal Survival, a program that seeks to reduce maternal and infant mortality by 25% in 2011 to 2016. Therefore it is necessary to study any factors that can affect preterm labor. So that it is expected to be able to reduce maternal and infant mortality and morbidity. The World Health Organization (WHO) states that premature births in the world

reach 15 million babies every year and one million babies die from complications of prematurity. Indonesia is ranked the fifth highest preterm birth in the world with 15.5 per 100 live births (Abubakari, Taabia, and Ali 2019). In Bojonegoro Regency the number of premature births in 2018 is 404 cases, from 17,172 births. In one area of the Community Health Center, the highest incidence of premature was at the Balen Community Health Center, which was 34 cases out of 855 births. In Sumberjo Community Health Center as many as 35 cases from 542 births. Adaptability Premature babies are lower than term babies. Good nursing actions will help the transition period of the baby Prematurely achieving optimal baby adaptation and development. Can be done through the application of developmental care (Wisnu, Wrahathingih, and Sumasto 2018). A key component in this developmental care is support for parents (especially mothers) to be competently involved as the primary caregivers of their babies (Astuti et al. 2019). Premature babies in general need help for survival shortly after birth. This will cause the baby to separate from his mother. Involving the mother in baby care can facilitate the relationship of affection and delayed attachment between mother and baby. Mother-baby interaction is an active and influential mutual relationship. Between mother and baby positive behavior can occur including: looking at each other, smiling, imitating, contingency, responsive, in harmony and playing (Hery Sumasto, Sulikah 2019).

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The involvement of the mother in baby care is to involve the mother in routine care activities in a pleasant situation for the mother and baby to build self-confidence and positive attachment to the baby. This is one component in the concept of family centered care (FCC).

METHODS

This type of research is observational analytic research, with a quantitative approach. The method of data collection in this study was cross sectional, data collection was carried out at the same time between the independent variables and the dependent variable. The population in this study were all mothers who had babies with a history of delivering premature babies in the Bojonegoro region. The sample in this study were some pregnant women who had babies with a history of preterm labor in the Bojonegoro region.

RESULTS AND DISCUSSION

The results in this study general data include characteristics of nursing mothers based on knowledge, and exposure to mass media. While specific data in the study are as follows.

3 Characteristics of Respondents: Variables Characteristics of mothers are: age, education, occupation, parity, premature birth history, knowledge.

RESULTS OF ANALYSIS TEST

Results of the multiple regression analysis test, the dominant factors that influence the success of preterm infant care are: Mothers who have a history of premature delivery have a successful rate of caring for premature babies (p-value = 0.047 smaller than <0.05)

- The level of knowledge has a relationship with the level of success of mothers in caring for premature babies (p-value 0.021 smaller than <0.05)
- This method of care has success with success in caring for premature babies (p-value 0.008 smaller than <0.05)

DISCUSSION

Characteristics of respondents

Age of Respondents: Therefore it is important for planning pregnancy at a healthy reproductive age that is 20 - 35 years. Women who are aged <20 years and over 35 years are a risk factor for maternal and infant mortality. At the age of <20 years the uterus and pelvis have not yet reached their maximum size. While those aged > 35 years have a higher risk of developing obstetric complications. In pregnancy at the age of less than 20 years physically and psychologically still not mature. Attention to self-fulfillment, fulfillment of nutrients during pregnancy becomes less. At the age of more than 35 years associated with setbacks and decreased endurance and various diseases that often afflict this age (Djunawan and Haksama 2015). Pregnant women who are in a healthy reproductive period or not at a healthy reproductive age are equally potentially at risk of

accidents and disasters, especially in disaster-prone areas (S. Hery Sumasto *et al.* 2019)

Education: Based on the characteristics according to the status of Education obtained the highest number of maternal education is Basic that is equal to 58%. The rest is secondary education (21%) and higher education (21%). The mother's education level, related to her knowledge of the importance of maintaining the womb during pregnancy. Low maternal education makes health promotion difficult. Health education for mothers has the potential to be difficult to accept in daily life. Because they are less aware of the importance of information about the health of pregnant women, so they do not know how to care for health, especially during pregnancy. Therefore the role of cadres becomes very important. Health cadres can provide education and health education. Various methods can be carried out and designed by cadres to help pregnant women understand the health education materials they receive (Wisnu, Wraathingih, and Sumasto 2018)

Job Status

Based on the results of the study it was found that all respondents were housewives. The incidence of preterm delivery is lower in pregnant women who are not workers, compared to mothers who are workers. A mother's work can increase the incidence of premature delivery either through physical fatigue or stress, arising from work. Types of work that affect the increase in prematurity are overwork hours, heavy physical work, and stressful work (Hery Sumasto, Nurwening Tyas Wisnu 2018).

Parity

Based on the results of the study found that most of the respondents included in the multi-category category (86%). Parity shows the number of previous pregnancies that have reached the limits of viability and have been born (alive or dead), regardless of the number of children (Estadual, Estadual, and Estadual 2012). The parity classification is as follows:

- Nulipara is a woman who has never completed pregnancy until the viability limit (20 weeks) (Badan Pengembangan dan Pemberdayaan SDM Kesehatan Direktur Jenderal Bina Gizi dan KIA Penanggung Jawab 2015).
- Primipara is a woman who has given birth once with a fetus that has reached the limit of viability, without remembering the fetus is alive or dead at birth (Mardiyanti *et al.* 2019).
- Multipara, a woman who has experienced the last two or more pregnancies when the fetus has reached viability (Sumasto and Wisnu 2016).

Parity has a significant relationship with premature parturition (Sumasto and Wisnu 2016). Women whose parity is more than 3 there is a tendency to have a risk of 0.56 times greater to deliver premature babies when compared to women whose parity is less than 3 (Rahmawati, 2013)

Knowledge: Based on the results of the study as many as 50% of mothers in the good knowledge category. Knowledge is the result of understanding from sensing an object (Latiña 2015). Sensing occurs through the five senses, namely the sense of

Table 1 Distribution of Respondent Characteristics

No.	Category	Frequency	Percentage (%)
Characteristics by age			
1.	Age 20-35 years	22	78,00
2.	Age > 35 years	6	22,00
Total		28	100,00
Characteristics by Education			
1.	Elementary school.	16	58,00
2.	High school education equivalent	4	21,00
3.	Bachelor	4	21,00
Total		28	100,00
Characteristics by Job			
1.	Housewives	28	100,00
Total		28	100,00
Characteristics by Parity			
1.	Primipara	11	14,00
2.	Multipara	17	86,00
3.	Grandmultipara	0	00,00
Total		28	100,00
Characteristics by Knowledge			
1.	Good Knowledge	14	50,00
2.	Enough Knowledge	7	25,00
3.	Lack of knowledge	7	25,00
Total		28	100,00
Characteristics by Premature Birth History			
1.	History is premature birth	2	7,00
2.	Never born prematurely	26	93,00
Total		28	100,00

Attitudes, Methods of Care and Success of Premature Baby Care.

Table 2. Distribution of Respondents' Answers Based on Attitudes towards preterm baby care

No	Statement	Agree		Disagree		Total n (%)
		n	%	n	%	
1	We recommend that at all times mothers always maintain the warmth of babies born prematurely	10	100	0	0	100
2	Premature babies should always be treated with the kangaroo method or mother's skin contact with the baby's skin	10	100	0	0	100
3	Premature babies should still be given milk so that growth is good	7	70	3	30	100
4	Always maintaining the warmth of a premature baby will prevent complications	10	100	0	0	100

Methods of Care for Premature Babies

Table 3 Distribution of Respondents' Answers Based on premature baby care methods.

No.	Category	Frequency	Percentage (%)
1.	Incubator	14	50,00
2.	Skin to skin contact	14	50,00
Total		28	100,00

Table 4 Distribution of Respondents' Answers Based on Success in Care of premature babies

No.	Category	Frequency	Percentage (%)
1.	Increase < 500 grams	10	36,00
2.	Increase > 500 grams	18	64,00
Total		28	100,00

sight, smell, taste and taste of most of human knowledge obtained through the eyes and ears. Health knowledge will also influence the behavior of some of the medium-term outcomes of health education (N. W. Hery Sumasto 2020). Experience can also influence knowledge, and this is related to age and education. This means increasing age and education, the broader a person's experience (Notoatmodjo, 2005). The higher the level of education the more knowledge gained. This will be able to help the mother in dealing with her pregnancy, baby's

care and care. Mother's experience in providing professional knowledge and skills will be able to develop decision-making abilities which are manifestations of scientific reasoning cohesiveness. Age influences one's comprehension and mindset, where the higher the age of the respondent has the tendency to have a fairly good knowledge about something. Mother's experience of having a LBW baby beforehand can make a good contribution to the knowledge and attitudes of mothers regarding the implementation of LBW babies.

Respondents with higher education have better knowledge than respondents with lower education (Sumasto and Wisnu 2016). The advance of technology will be available in various mass media that can influence mothers' knowledge about baby care. As a means of communication, various forms of mass media such as television, radio, newspapers, magazines, etc. have a great influence on the formation of opinions and beliefs of mothers. From Erniati's research (2015), the results show that low knowledge will lead to difficulties in absorbing information from outside, both from health workers and the mass media (Retna and N 2020).

History of premature labor: History of premature birth, is a factor that is very close to the next premature birth. The risk of preterm birth increased 3 times, compared with women whose first baby reached term. Percentage of likelihood of recurrent preterm birth in pregnant women who have had one preterm birth is 15% Whereas for mothers who have had preterm birth twice, they have a 32% risk of having a preterm birth (Ristrini 2014). Based on research conducted in Gaza Palestine in 2002 women who have a history of preterm birth have a risk of 5.58 times to experience premature birth again (Hamad, 2007). Attitudes, Methods of Care and Success in Care of Premature Babies

Attitude: From the results of the study some respondents were positive about the care of premature babies. Attitude is a readiness to react to certain environmental objects as an appreciation of the object. Attitude has 3 main components, namely trust (belief) towards an object, emotional life or evaluation of an object, and a tendency to act. These three components together form a complete attitude. In determining this whole attitude, knowledge, thoughts, beliefs and emotions play an important role (Notoatmojo, 2007). Attitudes can also be positive and can also be negative, positive attitudes toward action tendencies are approaching, liking, expecting certain objects and negative attitudes have a tendency to stay away from, avoid, hate, dislike certain objects (Hermani Triredjeki 2020). This is consistent with the theory that attitudes are formed by 3 components namely cognitive, effective and conative components. The cognitive component is the percentage of what the individual owner will believe.

An effective component is a percentage that influences emotional aspects and conative component is an aspect of certain behavioral tendencies according to the attitudes possessed (Azwar, 2010). The respondent's attitude can also be influenced by sources of information and personal experience. The existence of a positive / supportive attitude can be due to the knowledge and experience that many have gained so that they have the desire to be able to carry out premature baby care properly. This is also in line with research other, that most respondents have a good or positive attitude which is 67.9% towards the treatment of the kangaroo method because they already have a lot of knowledge about FMD. While Rahayu's (2013) research results showed a positive attitude shown by respondents who received prior information (Amalia, L. Herawati 2018).

Methods of Care for Premature Babies: The results showed that of 75 respondents 54.7% carried out the treatment of the kangaroo method. This shows that in most mothers who have LBW infants in the perinatology room, they have implemented

the Kangaroo Care Method as an alternative treatment for low birth babies. In addition, mothers who use the kangaroo method have high motivation in caring for babies born low, as seen from the observation data, kangaroo methods are increasingly growing kangaroo methods as an alternative care for low born babies have the benefit of increasing the bond of affection between mother and baby, making it easier for babies in meeting nutritional needs, prevent infection and shorten the period of hospitalization so as to reduce treatment costs (Susilaningrum, Utami, and Nursalam 2018). The kangaroo method can meet the needs of low birth weight babies by providing situations and conditions similar to the mother's womb.

Success in Premature Baby Care

Various interventions for premature infants began to be developed to be able to spur growth and development and shorten the period of care. Tactile, kinesthetic, vestibular, oral, auditory and other stimulation combinations are needed for the development of extra uterine premature infants and help babies adapt to the extra uterine environment (S. Hery Sumasto *et al.* 2019). Several studies have proven that premature babies who are massaged will experience greater weight gain (47%) and have shorter treatment periods ranging from 3-6 days out of hospital faster than the control group so as to save the cost of 10,000 American dollars in infants (Fadhillah *et al.* 2018). Studies on the mechanism of the effects of infant massage on physiological and biochemical changes to promote growth, including increased vagus activity which will further affect the release of digestive hormones such as gastrin, insulin and insulin-growth factor (IGF-1) and increase the efficiency of the body's metabolic processes. Other effects of massage therapy are reduced levels of infant stress as evidenced by the reduction in stress hormones (cortisol, adrenaline and noradrenaline), making babies sleep more soundly and improve the relationship (bonding) of mother and child (E fendi *et al.* 2016).

Conclusion

Based on the results of research and discussion can be concluded as follows

- Characteristics of Respondents covering age, education, occupation, parity, knowledge and history of premature childbirth allows the potential for premature babies to be born.
- Positive respondent's attitude towards the care of premature babies especially about maintaining the warmth of premature babies (70%).
- Of the three factors analyzed by multiple logistic regression, the most dominant factor in the success of preterm baby care is 1) the method of caring for the baby's skin contact with the mother; 2) Knowledge level and 3) Birth history.

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