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Research Article

The Effect of Health Education in Postpartum Mothers on Colostrum on the Intensity of Early Breasfeeding in Newborn Babies

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Abstract

Aims: To determine the effect of health education on mothers about colostrum with the intensity of early breastfeeding.
Methods: Quasi-experimental with one group pretest-posttest design. Education was delivered for one week consisting 3 session and 90 minutes for each session
Sample of this study was mothers who have newborn baby and willing to participate in this study.
Result: The Colostrum Correlation value is 0.542 with a p-value of 0.000, there is a relationship between the Pre-test Colustrum variable and the Post-test realized. The correlation between breastfeeding is 0.624 with a p-value of 0.000, there is a relationship between the pre-test and post-test variables of breastfeeding.
Conclusion: There is a relationship between the frequency of colostrum measurements with breastfeeding before and after the intervention

Keywords:
Post Partum, colostrum, brestfeeding

INTRODUCTION

In Indonesia, the infant mortality rate is 74 per 1,000 live births. The Indonesian Pediatrician Association noted that more than 10 babies and 20 children under five years die every hour in Indonesia. Breast milk (ASI) has long been believed to be the only primary nutrition for newborns. Therefore breastfeeding must be done regularly. Full, namely starting with exclusive breastfeeding and continuing breastfeeding until the child is 2 years old properly and correctly and the child gets a natural immune system. No formula can replace a baby's immune protection, such as that obtained from colostrum, the milk produced during the first few days after birth (1). Colostrum is very beneficial so breastfeeding in the first weeks has a significant meaning for the further development of the baby. Breast milk is an essential food for babies (2).

Based on Law Number 36 of 2009 concerning Health (3), Government Regulation of the Republic of Indonesia Number: 33 of 2012 concerning Exclusive Breastfeeding (ASI), Joint Regulation of the State Minister for Women's Empowerment, Minister of Manpower and Transmigration and Minister of Health, Number: 48/ MEN.PP/XII/2008, Number: PER.27/MEN/ XII/2008 and Number: 177/MENKES/PB/ XII/2008 concerning Increasing Breast-feeding During Working Time at Work and taking into account the results of Basic Health Research (Riskesdas) in 2013 stated that the percentage of breastfeeding only (exclusive breastfeeding) for infants up to the age of 6 months was 30.2%, while the national target was 75%.

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The Government of Indonesia, especially the Ministry of Health, has adopted exclusive breastfeeding for 6 months, according to recommendations from the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), as a program to improve infant or toddler nutrition. The program target to be achieved in Healthy Indonesia 2015 is that at least 80% of breastfeeding mothers provide exclusive breastfeeding (4).

Formula milk can not replace the immune protection of a baby, such as that obtained from colostrum, the milk produced after birth. Mother's milk is the most important food, especially in the first months of life. The composition of nutrients in breast milk can optimally ensure the baby's growth. The best nutritional composition of breast milk is in the first three days after birth, called colostrum (5).

Colostrum is the first fluid secreted by the mammary glands. The highest content in colostrum is antibodies ready to protect the baby when the baby's condition is still frail. The protein content in colostrum is higher than in mature milk. Early giving of colostrum to babies and continuous breastfeeding is the best protection for babies because babies can avoid disease and have anti-immune substances 10-17 times more than mature/mature milk (6).

Giving colostrum makes the uterus contract properly and slows bleeding. Women who breastfeed their babies will lose weight faster than the weight gained during pregnancy. Therefore, if colostrum is not given during the puerperium as soon as possible, it will cause the recovery process after delivery to be hampered. In addition to the impact on the baby, if not given colostrum, a weak immune system is susceptible to various diseases (7)

Based on data obtained at BPM Suryati from January-March 2022, 20 maternity mothers did not want to give colostrum to their babies from 38 deliveries. A preliminary study conducted by researchers at BPM in December 2021 showed 11 mothers giving birth and 7 people who did not give colostrum. From the data above, it can be seen that there are still many maternity mothers who do not want to give colostrum to their babies. Thus the management must be appropriate so that complications and newborn deaths do not occur.

METHODS

Study design and intervention

This type of research is quasi-experimental research with one group pretest-posttest design. Quasi-experimental research is a form of experimental research that does not have a control group (8). As a result, the treatment results can be known more accurately.

Education was delivered for one week consisting 3 session and 90 minutes for each session. The content of education related to the important of Breastfeeding, benefit of colostrum, the way to provide baby breastfeed, and simulation for breastfeeding (9).

Sample

Sample of this study was mothers who have newborn baby and willing to participate in this study. We excluded mothers who had history of any complication both mothers or babies. Convenience sampling was used to recruited participants.

Measure

To eliminate bias from the study results, pre-test and post-test will be carried out for each treatment using misoprostol and oxytocin. The research data collection method uses primary data taken directly from the respondents by observation.

Data analysis

Data were analysis using descriptive statistic such as frequency, mean, maximum and minimum value. Pair t tes was used to determine the effect of health education on intensity of early breastfeeding. All test was done using SPSS version 23.

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RESULTS

Table. 1
Frequency Distribution of Respondents Characteristics. N= 38

No	Variable	Frequency	Percentage
1.	**Age**		
	20-25	23	60,5
	26-35	15	39,5
2.	**Education**		
	Primary – Junior high School	13	34,2
	Senior high school	25	65,8
3.	**Occupation**		
	Housewife	11	28,9
	Private employees	1	2,6
	Civil servant	1	2,6
	entrepreneur	1	2,6
	others	24	63,2
4.	**Childbirth History**		
	Have given birth	19	50,0
	Never gave birth	19	50,0
	Total	**38**	**100,0**

Based on the table.1 above, it can be seen that among 38 respondents aged 20-25 years as many as 23 respondents (60.5%) and those aged 26-35 years, as many as 15 respondents (39.5). Based on education, there were 13 respondents with basic education (34.2%), with secondary education as many as 25 respondents (65.8%). Based on occupation, there were 11 housewives (28.9%), 1 respondent (2.6%), 1 respondent (2.6%), 1 respondent (2.6%), 1 respondent, self-employed and others as many as 24 respondents (63.2%). Based on the history of childbirth, it was found that 19 respondents (50.0%) had given birth, and 19 respondents (50.0%) had never given birth.

Univariate Analysis

Table. 2
Colostrum Measurement Frequency Distribution

No	Variable Category	Minimum Value	Maximum Value	Mean
1.	Pre Test	30	90	52,37
2.	Post Test	80	90	91,84
Total		**38**	**38**	**100%**

Based on the table. 2, it can be seen that from 38 respondents, the minimum score on the pre-test was 30, and the maximum value was 90, with a mean value of 52.37. In comparison, the minimum value in the post-test 80 and the maximum value is 90, with a mean value of 91.84.

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Table. 3
Distribution of Breastfeeding Measurement Frequency

No	Variable Category	Minimum Value	Maximum Value	Mean
11	Pre Test	30	90	57,63
2.	Post Test	80	100	90,79
Total		**38**	**38**	**100%**

Based on table 3, it can be seen that from 38 respondents, the minimum score on the pre-test was 30, and the maximum value was 90, with a mean value of 57.63. However, the minimum value in the post-test is 80, and the maximum value is 100, with a mean value of 90.79.

Bivariate Analysis

Table. 4
Correlation between Colostrum Frequency and Breastfeeding before and after intervention

Post Test	Pre Test						*P Value*
	Mean	t	Lower	Upper	F	%	
Colustrum	-39.474	0.542	-44.181	34.766	38	100	0.000
Breast milk	-33.158	0.624	-38.567	27.749	38	100	0.000
Total	100%	100%	100%	100%	100%	100%	

The Colostrum Correlation value is 0.542 with a p-value of 0.000, so it can be said that there is a relationship between the Pre-test Colustrum variable and the Post-test realized. And the correlation between breastfeeding is 0.624 with a p-value of 0.000, so it can be said that there is a relationship between the pre-test and post-test variables of breastfeeding.

DISCUSSION

1. Characteristics of Respondents

Age

From the results in the table.1 above, it can be seen that there are 38 respondents aged 20-25 years, as many as 23 respondents (60.5%), and with ages 26-35 years, as many as 15 respondents (39.5). The age/age factor is very influential in giving colostrum to newborns through data testing. According to the researcher, the age/age factor is a predisposing factor related to the experience of giving birth and caring for a baby. Therefore, experience plays an essential role for a mother in giving colostrum. Experience is an informal source of knowledge whose use is determined by a person's ability to reflect on the impact of his experience.

Education

From the results in table 1 above, it can be seen that from 38 respondents with primary education, there were 13 respondents (34.2%) who had secondary education and as many as 25 respondents (65.8%). According to the research results obtained, educational factors can influence the giving of colostrum to newborns. According to researchers, the level of education can affect the learning process of an individual so that the higher a person's

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education, the easier it is for individuals to receive information. In addition, the educational factor is related to the mother's knowledge about the benefits of colostrum for her baby. Therefore, the higher the education received by a mother, it is expected that the higher her knowledge about the benefits of giving colostrum.

Work

From the results of the study based on table 1 above, it can be seen that the work obtained from 38 respondents whose work was found to be homemakers as many as 11 respondents (28.9%), private employees as many as 1 respondent (2.6%), civil servants as much as 1 respondent (2.6%), self-employed as many as 1 respondent (2.6%), and others as many as 24 respondents (63.2%). Work influences giving colostrum to newborns through the data obtained. Work refers to the importance of an activity, time, and energy spent and is a set of specific skills and competencies that must constantly be improved from time to time with the expectation of monetary rewards (or in other forms) or without expecting rewards, but with a sense of obligation to others. Others. According to researchers, mothers who do not work have no dependents or burdens and have more time with their babies, while working mothers will have a workload that may interfere with the mind or psyche (10).

Childbirth History

The study results based on table 1 above show that the history of childbirth was obtained from 38 respondents who had given birth, as many as 19 respondents (50.0%) and 19 respondents (50.0%) who had never given birth. Labour history factors can affect the administration of colostrum to newborns through the results obtained. According to the researchers, parity is also related to the mother's experience. In general, if she has experienced repeated labor, the mother will better understand the importance of colostrum.

Colostrum Knowledge Measurement.

From the study results based on table 2, it can be seen that from 38 respondents, the minimum score on the Pre-test variable was 30, and the maximum value was 90, with an average value of 52.37. While the minimum value on the post-test variable is 80, and the maximum value is 90, with an average value of 91.84. From the level of increase in the average value, it is obtained if the average weight increases after counseling/health education about colostrum at Gempol health center. Therefore, there are significant results on the colostrum measurement variable. There is a difference between the pre-test and post-test variables where confirmation/health education has been carried out through the data obtained. According to the researcher's opinion, when viewed from the research results above, less knowledgeable mothers do not give colostrum due to a lack of knowledge about colostrum, so mothers do not give colostrum to their babies. Furthermore, because mothers receive complete information from birth attendants, mothers' knowledge about colostrum is influenced by the active role of health workers, such as providing counseling about colostrum. (11) Therefore, the mother's knowledge about colostrum in this study is everything mothers know about colostrum breast milk.

Measurement of Breastfeeding Knowledge

From the results of the study based on the table. 3, it can be seen that from 38 respondents, the minimum score on the Pre-test variable was 30, and the maximum value was 90, with an average value of 57.63. While the minimum value on the post-test variable is 80, and the maximum value is 80, with an average value of 90.79. The average value level increases if the average value increases after health counseling/education are carried out on breastfeeding at the Gempol Health Center. The average value level increases if the average value increases after

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counseling/health education about colostrum at the Gempol Health Center. Therefore, there are significant results on the variable of breastfeeding where there is a difference between the pre-test and post-test variables where health education/ instruction has been carried out through the data obtained.

According to the researcher, knowledge about breastfeeding is essential for mothers. There is a tendency for mothers who have poor or poor knowledge about breastfeeding to tend not to give breast milk immediately after birth. A positive attitude and sound knowledge are the keys to successful breastfeeding.13 Good knowledge is correlated with a positive attitude. The better the mother's knowledge about breastfeeding, the more positive the mother will be about breastfeeding.

From the results of table 4 analysis of the the effect of health education on colostrum with breastfeeding before and after the intervention at the Gempol Health Center, 38 respondents were obtained in the pre-test variable between colostrum health education and breastfeeding with a mean of -39,474 where in the post-test variable between colostrum health education and breastfeeding with a standard of -33,158, so there is a difference in the value that indicates an increase in the value.

The statistical test results show that the value of the t value is 0.542 with a p-value of 0.000. So it can be said that there is a difference between the Pre-Test Colustrum variable and the Post-test realized. The t value between breastfeeding is 0.624 with a p-value of 0.000, so it can be said that there is a difference between the pre-test and post-test variables of breastfeeding.

From the analysis results, it was also found that the Lower value in the pre-test variable between colostrum health education and breastfeeding with a consequence of -44.181. In comparison, the Lower value in the post-test variable between colostrum health education and breastfeeding with a result of -38.567, so there is a difference in value that indicates an increase in value. And the Upper value in the pre-test variable between colostrum health education and breastfeeding with a result of 34,766, while the Upper value in the post-test variable between colostrum health education and breastfeeding with a result of 27,749, there are differences in values that show promising results.

According to researchers, attitude is a learned predisposition or tendency of an individual to respond positively or negatively with moderate and or adequate intensity to objects, situations, concepts, or other people. The bias directed towards the object is obtained from the learning process. The definition is consistent with attributing attitude as a predisposition or tendency to determine an individual's response to an object. This predisposition or tendency is obtained by individuals from the learning process, while the object of attitude can be in the form of objects, situations, and people.

Health education is an activity to increase knowledge by spreading messages and believing in the importance of health so that people are not only aware, know, and understand. Still, it can do something and know what to do. With this health education, it is hoped that there will be changes in the respondents' health behavior, which will improve or maintain health. The researcher's advice for mothers who have newborns is that many mothers do not know the importance of giving colostrum to newborns, one of which is influenced by the knowledge factor caused by information that is not conveyed correctly. One of them is throwing away colostrum because colostrum is considered dirty and contains drugs that should not be given to babies.

CONCLUSION

In this study, the distribution of the frequency of breastfeeding measurements obtained a minimum pre-test value of 30, a maximum value of 80, and a mean value of

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57.63. For the post-test, it was 80 and a maximum value of 100 with a mean value of 90.79. There is a correlation between the frequency of colostrum measurement and breastfeeding before and after the intervention. The correlation value is 0.542 (colostrum) and 0.624 (breast milk) with a p-value of 0.000, so it can be said that there is a relationship between the variables.

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