

The Effect of Breastfeeding Calendar Training on Knowledge and Attitudes of Mothers in Exclusive Breastfeeding

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ABSTRACT

Background: Lactating mothers were successful in giving exclusive breastfeeding as much as 42% based on SDKI (Survei Demografi Kesehatan Indonesia) in 2012. This is depend on the support of husbands and families as well as health workers. Thus, the husband or family should remind and motivate mothers as well as monitor the breastfeeding activity every day for 6 months using breastfeeding calendar.

Objectives: This study aimed to determine the increase in knowledge and attitudes of mothers in providing exclusive breastfeeding after the exclusive breastfeeding calendar training.

Materials and Methods: The research design used a quasi-experimental one group pre-test post-test design. This research was conducted on mothers who had babies (age 0-12 months) in Pasawahan Village and Pasawahan Kidul Village, Pasawahan District, Purwakarta Regency in April to November 2018, with 96 respondents. The sampling technique was conducted by purposive sampling. Data were collected by giving questionnaires to respondents, before and after the breastfeeding calendar training were given. The Wilcoxon test was used for the analysis of the data in this study.

Results: The results showed that there were differences in the knowledge of mothers before and after training on breastfeeding calendar ($p < 0,000$) and there were differences in the attitudes of mothers before and after the training on breastfeeding calendar ($p < 0,000$).

Conclusions: There was an increase in knowledge and changes in the attitude of mothers towards exclusive breastfeeding after being given the breastfeeding Calendar training. Therefore, suggestions for health workers, especially midwives and nutrition workers, can use the breastfeeding calendar as an educational medium to increase husband and family support in exclusive breastfeeding.

Keywords: Attitude; Exclusive breastfeeding; Knowledge; breastfeeding calendar

BACKGROUND

One of the MDGs' goals is to end hunger, to achieve food security, to improve nutrition, and to encourage sustainable agriculture. The MDGs target by 2030 is to demolish all forms of malnutrition, including to achieve the international target of 2025 in reducing stunting.¹

The stunting rate in Purwakarta Regency, West Java, is 30.1% based on Pemantauan Status Gizi (PSG) or Nutritional Status Survey data in 2017, stunting is a condition of failure to thrive in children under five as a result of chronic malnutrition so that the child's height does not match their age. Stunting prevention efforts must be done in every life cycle. Efforts to prevent stunting are carried out at 1000

HPK (first day of life), starting from pregnancy until the child is 2 years old. One of the efforts to prevent stunting is by giving babies exclusive breastfeeding. Lactating mothers were successful in giving exclusive breastfeeding as much as 42% based on SDKI (Survei Demografi Kesehatan Indonesia) in 2012.² One of the factors of exclusive breastfeeding failure is the lack of support from the environment around the mother.³

The success of this activity is influenced by the support of husband and wife, so that when the mother is breastfeeding, it can put the baby to sleep longer.⁴ Therefore, when a mother starts breastfeeding, she will regulate milk production.⁵ Other than that, husbands who attend childbirth

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preparation classes will have a positive effect on breastfeeding and contribute to a woman's breastmilk production.⁴ Thus, the success of breastfeeding is highly dependent on the support the mother receives from her husband.⁶

When the mother starts breastfeeding, this process will indirectly regulate milk production.⁵ Couples support in breastfeeding affects the success of breastfeeding, thus making the baby sleep longer. Husbands who attend childbirth preparation classes will have a positive effect on breastfeeding and provide exclusive breastfeeding.⁴ Thus, the success of breastfeeding is highly dependent on the support the mother receives from her husband.⁶

Based on the results of a research conducted in Bali, mothers who provide exclusive breastfeeding tend to receive support from their husbands and families. In addition, mothers get supports from health workers to provide exclusive breastfeeding.⁷ Emotional support is focused on respect, admiration, and love. This can raise awareness of the difficulties of breastfeeding practice and increase patience in breastfeeding so as to increase respect and appreciation for nursing mothers.⁸

Thus, the husband must also have knowledge about breastfeeding so that we need some media to receive information about how mother's body anatomy and physiology support breastfeeding, including knowing other important functions of a woman's breasts and the health benefits of breastfeeding. Husbands must have knowledge about breastfeeding in order to be able to support mothers during this practice. Therefore, we need a medium of information about how the anatomy of the body and physiology of breastfeeding mothers, including knowing other important functions of a woman's breast and the health benefits of breastfeeding.⁹

Promotion of breastfeeding through the media will affect the attitude of mothers to breastfeed their babies.¹⁰ Especially for working mothers, they need a handful of information on how to provide exclusive breastfeeding. In addition, on how to deal with barriers to breastfeeding such as breast dams. Mother needs support from husband or family. Under these conditions, a breastfeeding calendar is required to monitor breastfeeding activity in 6 months. Husbands or families can

provide a reminder, motivate, and increase the knowledge of mothers to give breastfeeding every day for 6 months using breastfeeding calendar.¹¹

Therefore, this study aims to determine the increase in knowledge and attitudes of mothers in giving exclusive breastfeeding after breastfeeding calendar training.

MATERIALS AND METHODS

The research design used was a quasi-experimental one group pre-test post-test design. This research was conducted by providing training on exclusive breastfeeding and the use of the breastfeeding calendar. Respondents were given a pre-test and post-test before and after breastfeeding calendar training.

This research was conducted on mothers who have babies (0-12 months old) in Pasawahan Village and Pasawahan Kidul Village, Kec. Pasawahan, Purwakarta Regency from April to November 2018 with a population 135 mother. The sampling technique was carried out by purposive sampling. The samples in this study were 96 respondents who met the inclusion and exclusion criteria. The sample size was obtained through the calculation of the minimum sample for cross sectional research, with the proportion of exclusive breastfeeding for Purwakarta in 2017 of 55.08% and an error rate of 0.1. The inclusion criteria in this study are mothers who were willing to fill out the informed consent form. The exclusion criteria in this study were mothers who were not present at the time of data collection. Samples were taken from villages with the most number of babies in a sequence until the desired sample size was obtained. There are two research variables in this study. Firstly, the independent variables in this study were the knowledge and attitudes of mothers in exclusive breastfeeding. Secondly, the dependent variable is breastfeeding calendar training.

This training was conducted within 1 day in the form of providing material about 1000 HPK, exclusive breastfeeding, problems and handling of breastfeeding, as well as how to use the breastfeeding calendar. The resource person for this training is a research team who also acts as an enumerator in data collection. Data were collected by giving questionnaires to respondents before and after being given training using breastfeeding

calendar as a training medium. This breastfeeding calendar is a calendar that came with educational material, including the differences between exclusive breastfeeding and formula milk, the benefits and content of breast milk, a good and proper breastfeeding position, ways to express and store breast milk, breast care, and the role of fathers in exclusive breastfeeding. The questionnaire was made based on the results of the Focus Group Discussion (FGD) which made the questionnaire from the results of the research conducted by research team entitled The Initiation of Exclusive Breastfeeding Calendar to Increase Exclusive Breastfeeding.¹¹ The questionnaire was given to 50 mothers who have toddlers in the village Marga Asih, Kec. Pasawahan, Kab. Purwakarta. Then the validity test with Pearson correlation and reliability test with Cronbach's Alpha were executed and the result showed a value of $0.736 > 0.7$ so the

questionnaire declared reliable. The questionnaire contains knowledge and attitudes of mothers about exclusive breastfeeding and the use of the exclusive breastfeeding calendar. Data analysis was in the form of bivariate data using the Wilcoxon test of the SPSS program version 15.0. This research has obtained research ethics permit with no. 367/UN6.KEP/EC/2018 from the e-commission of research ethics at the University of Padjadjaran.

RESULTS

Based on table 1. that breastfeeding mothers who participated in the breastfeeding calendar training had characteristics that included ages between 20-35 years of 72.9, mothers who had children > 1 (multipara) by 56.2%, with high school education of 42.7% , and mothers not working by 77.1%.

Table 1. Characteristics of Breastfeeding Mothers in Breastfeeding Calendar Training

Mother characteristics	n	%
Age		
< 20 years old	4	4,2
20-35 years old	70	72,9
> 35 years old	22	22,9
Total	96	100
Parity		
Primipara	38	39,6
Multipara	54	56,2
Grande multipara	4	4,2
Total	96	100
Education		
Do not finish Primary School	5	5,2
Primary School	13	13,5
Junior High School	32	33,3
Senior High School	41	42,7
College	5	5,2
Total	96	100
Profession		
Does not work	74	77,1
Work	13	13,5
Other	9	9,4
Total	96	100

Table 2. Differences in knowledge of mothers before and after being given Breastfeeding Calendar Training

	N	Median (minimum-maksimum)	Z	P
Knowledge before being given breastfeeding calendar training	96	81 (33-100)	6,133	0,000

Knowledge after being given breastfeeding calendar training	96	90 (62-100)
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Based on table 2. there are differences in the knowledge of mothers before and after being given training on the breastfeeding calendar with a value of $p < 0.05$ and value of $z > 1,96$.

Table 3. Differences in attitudes of mothers before and after being given Breastfeeding Calendar Training

	N	Median (minimum-maksimum)	Z	P
Attitude before being given breastfeeding calendar training	96	73 (50-100)	6,382	0,000
Attitude after being given breastfeeding calendar training	96	75 (66-100)		

Based on table 3, there are differences in the attitudes of mothers before and after being given training on breastfeeding calendar with the value of $p < 0,05$ and value of $Z > 1,96$.

DISCUSSION

Based on table 1, breastfeeding mothers who participated in the breastfeeding calendar training had characteristics that included ages between 20-35 years of 72.9. This shows that most of the respondents are in the healthy reproductive age range. Healthy reproductive age in women is 20-35 years old, so that women have reached a mental maturity level in undergoing the reproductive process properly. Mothers who had children > 1 (multipara) by 56.2% because parity greatly affects the acceptance of one's knowledge. Thus, the more experiences a mother has in having children, the easier the acceptance of knowledge will be. Experience is a source of knowledge to obtain the truth of knowledge by repeating the knowledge obtained in solving problems faced in the past.¹² Mother have high school education of 42.7% because education will make someone motivated to be curious, seek experience, and organize experiences so that the information received will become knowledge. High education makes a mother more able to think rationally about the benefits of exclusive breastfeeding and more easily exposed to information compared to those with low education.¹³ Mothers not working by 77.1% so it is different from working mothers where efforts to provide exclusive breastfeeding often experience obstacles due to the short period of maternity and childbirth leave. Thus, before

exclusive breastfeeding ends perfectly, the mother must return to work.¹⁴ The results of this study are in line with the research conducted in the Puskesmas Nelayan, it was found that the characteristics of breastfeeding mothers who provide exclusive breastfeeding with the majority of mothers aged 20-35 years, high school education, and not working.¹⁵

In addition, based on the results of research conducted in British Columbia and Alberta (areas urban), that the number of mothers who breastfeed exclusively is higher than in New Brunswick, Newfoundland, and Quebec (areas rural). Breastfeeding mothers who provide exclusive breastfeeding have characteristics, including age, education and occupation. Therefore, increasing age and education of breastfeeding mothers living in British Columbia and Alberta have higher success in exclusive breastfeeding compared to nursing mothers living in New Brunswick, Newfoundland, and Québec.¹⁶

Based on table 2. there are differences in the knowledge of mothers before and after being given training on the breastfeeding calendar with a value of $p < 0.000$. Knowledge is the result of knowing someone after sensing an object.¹⁷ The object referred to in this study is the breastfeeding calendar. Increased knowledge in the training process shows that the breastfeeding calendar can be used as a medium for education and monitoring of exclusive breastfeeding by families, especially the role of husbands.¹¹

The results of this study are in line with research conducted in the city of Padang that there is an increase in the knowledge of breastfeeding mothers,

before and after getting promotion about exclusive breastfeeding through extension methods.¹⁰

Health promotion is carried out by health professionals, especially midwives in the form of training given to mothers to improve maternal and child health.¹⁸ One of the materials in this training explains that breastfeeding has a unique health aspect and it is important that breast milk is a unique

substance. Breast milk contains antiseptics which help to complement the immune system of immature babies. Some of the benefits of breast milk for babies are disease preventions, such as respiratory, stomach, intestinal, middle ear, and urinary tract infections. Breastfeeding babies tend to reduce the incidence of chronic diseases such as juvenile diabetes and asthma in babies at risk.¹⁹

Bulan : 1.						
Tahun :						
						1.
2.	3.	4.	5.	6.	7.	
8.	9.	10.	11.	12.	13.	
14.	15.	16.	17.	18.	19.	
20.	21.	22.	23.	24.	25.	
26.	27.	28.	29.	30.	31.	

Figure 1. Exclusive Breastfeeding Calendar



Figure 2. Educational Media

One of the roles of health workers is to carry out health promotion on exclusive breastfeeding as a source of information for breastfeeding mothers. In addition, health workers must provide optimal support to breastfeeding mothers.²⁰

Thus, health promotion media is needed to increase the knowledge and attitudes of mothers in breastfeeding. Breastfeeding has a major role in public health to improve the health of babies and mothers. Thus, mothers who provide exclusive breastfeeding are an action to promote the initiation and implementation of breastfeeding practices, especially for groups of breastfeeding mothers who do not exclusively breastfeed. Therefore, an effective program by making strategies to overcome the obstacles to exclusive breastfeeding practices.²¹

Health workers play a role in health promotion of exclusive breastfeeding. Additionally, health workers must also provide optimal support to

breastfeeding mothers.²⁰ So a health promotion media is needed to increase the knowledge and attitudes of mothers in breastfeeding. The breastfeeding calendar acts as a health promotion medium.¹¹

Breastfeeding has a major role in public health to improve the health of babies and mothers. Mothers who provide exclusive breastfeeding are an action to promote the initiation and implementation of breastfeeding practices, especially in groups of breastfeeding mothers who do not provide this practice. This program is an effective strategy in overcoming barriers to implementing exclusive breastfeeding.²¹

Mother's knowledge about exclusive breastfeeding and the attitude of breastfeeding mothers in exclusive breastfeeding is not optimal. Mother's understanding of information about exclusive breastfeeding will determine the breastfeeding mothers exclusively. Mother's

knowledge, mother's education level, and the child's age will affect the mother exclusively in breastfeeding. Health workers must carry out health promotions aimed at providing motivation and helping mothers to overcome obstacles during this practice.²²

Health education interventions were found to have succeeded in increasing knowledge and practice of exclusive breastfeeding. Hence, health education is recommended to increase the practice of exclusive breastfeeding among mothers.²³

Based on table 3, there are differences in the attitudes of mothers before and after being given training on ASI calendar with a value of $p < 0.000$. Attitude is an evaluative response to an object, namely the response of the evaluation process to a stimulus in the form of good and bad, positive and negative, pleasant and unpleasant judgments which

then crystallizes as a potential reaction to the object.²⁴

The trigger factor in giving exclusive breastfeeding to babies is knowledge, attitudes and behavior of the mother, where most of them still do not understand the benefits of exclusive breastfeeding. Maternal health status, family support and staff assisting in the childbirth process provide as reinforcing factors for exclusive breastfeeding for babies.²⁵

According to Skinner (1983) quoted from his book *Notoatmodjo* demonstrated that knowledge or cognitive is a very essential domain for the formation of one's actions (overt behavior). Before a person adopts a new behavior, a sequential process occurs within the person, that is awareness, where the person realizes in the sense of knowing in advance of the stimulus (object), interest (feeling attracted) to the stimulus or object. Thus by this, the attitude of the subject has begun to emerge.²⁶

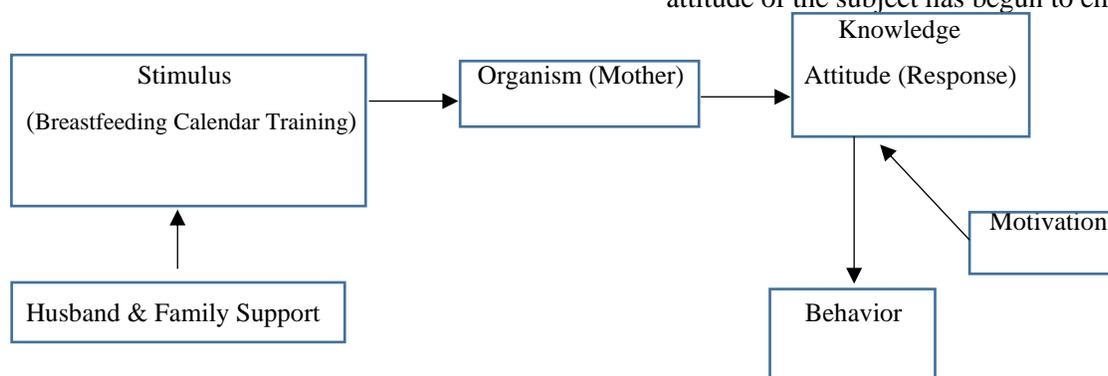


Figure 3. Theory of Stimulus-Organism-Response, Skinner 1983²⁶

Increased knowledge and attitudes of mothers regarding exclusive breastfeeding is a response to providing stimuli to mothers in the form of breastfeeding calendar training reinforced by the support received. Behavior will be manifested from existing knowledge and attitudes which are strengthened by the mother's motivation.²⁶

In addition to the level of knowledge, mother's belief plays a significant role in the decision of mothers to practice exclusive breastfeeding. Maternal beliefs about the impact of exclusive breastfeeding on maternal health, physical appearance, and ability to engage in other activities. This has been shown to have the strongest association with early cessation of exclusive breastfeeding. Overcoming this belief has

contributed to a more effective promotion of exclusive breastfeeding in rural Kenya.²⁷

Husbands have a role in exclusive breastfeeding, such as involvement in seeking information about breastfeeding and making decisions to provide food. Therefore, health workers also have an important role to play in providing information to fathers, especially about breastfeeding practices, such as how to support breastfeeding mothers and dealing with problems in breastfeeding, so that it can help mothers to successfully provide exclusive breastfeeding.²⁸

This is supported by the results of research conducted in Jambrana District that mothers who get good support from their husbands can provide more exclusive breastfeeding. Moreover, mothers

who get good support from health workers can provide more exclusive breastfeeding.⁷

In order to have the motivation to breastfeed, a mother must receive strong support from the surrounding environment to succeed.⁸ The breastfeeding calendar is an educational media and support for mothers in exclusive breastfeeding. Through the breastfeeding calendar, husbands or families can increase knowledge and provide support for mothers to successfully breastfeed exclusively.¹¹

The breastfeeding calendar media provides an advantage, namely that it can increase the concern of husbands and families because they can help monitor breastfeeding by filling in a calendar that is affixed to the wall. However, the disadvantages of the breastfeeding calendar cannot remind husbands and families if they forget to fill out the breastfeeding calendar. Thus, for further research, the breastfeeding calendar will be developed in the form of an application so that it can remind husbands and families and mothers in breastfeeding. In addition, suggestions for health workers, especially midwives and nutrition workers, to be able to use the breastfeeding calendar as an educational medium to increase husband and family support in exclusive breastfeeding.

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