



FAMILY EMPOWERMENT MODEL INTERVENTION ON BREASTFEEDING PATTERNS IN BOGOR CITY

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Abstract, Background: The target for achieving exclusive breastfeeding in 2025 globally is 50%, but the figure achieved in 2017 was only 40% (WHO, 2017). Exclusive breastfeeding coverage targeted in 2017 by the Directorate General of Nutrition and MCH Program is 44%. However, based on the 2017 Nutritional Status Monitoring results, the achievement of exclusive breastfeeding, namely breastfeeding only infants from 0-6 months of age without food and other fluids except for drugs, vitamins, and minerals, was only 35.7%. According to the Health Profile of West Java, the achievement of exclusive breastfeeding in 2016 in West Java was 46.4%. According to the LB3 Monthly Report, the achievement of exclusive breastfeeding in 2017 in Bogor City was 49.5%. The purpose of the research is "Family Empowerment Model Intervention Against Breastfeeding Patterns in Bogor City."

Methods: The research was carried out in two stages. The first stage was to design modules and media for family empowerment for "Family Class" activities. The second stage is to intervene in the family empowerment model with a non-equivalent group design. The study population was all pregnant women in the third trimester, where breastfeeding achievement was relatively low in Bogor. The number of samples in each intervention and control group was 25. Analyze changes in breastfeeding patterns before and after the intervention were analyzed using the Wilcoxon test because the data distribution was not expected. To analyze the effect of the intervention of the family empowerment model on breastfeeding patterns, the Mann Witney test was used because the data was not normally distributed.

Conclusion: The analysis results show an increase in knowledge and improvement in breastfeeding patterns after the family joins the family class.

Keywords: Empowerment, Exclusive Breastfeeding, Community

Background

Sustainable Development Goals (SDGs) continue the Millennium Development Goals (MDGs) program. The Sustainable Development Goals (SDGs) target a reduction in the neonatal mortality rate to 12/1,000 KH and the under-five mortality rate to 25/1,000 KH by 2030. Facing the challenges of the SDGs, it is necessary to have a child health program that can reduce morbidity and mortality in infants and toddlers. One of the programs is the exclusive breastfeeding program (1).

Exclusive breastfeeding is the provision of only breast milk to infants for the first six months of a baby's life without providing other food or fluids, except vitamins, minerals, and

drugs that have been permitted (2). Breastfeeding will provide many benefits for babies, among others, can provide growth and development of babies because the content of breast milk is created according to the baby's needs, contains antibodies to protect babies from bacterial, viral, fungal, and parasitic infections, avoids allergies that sometimes arise. Due to the consumption of formula milk, babies feel their mother's love directly during the breastfeeding process. When they grow up, they will reduce the risk of developing hypertension, cholesterol, overweight, obesity, and type 2 diabetes (3).

The target for achieving exclusive breastfeeding in 2025 globally is 50%, but the

figure achieved in 2017 was only 40% (2). Exclusive breastfeeding coverage targeted in 2017 by the Directorate General of Nutrition and MCH Program is 44%. However, based on the 2017 Nutritional Status Monitoring results, the achievement of exclusive breastfeeding, namely breastfeeding only infants from 0-6 months of age without food and other fluids except for drugs, vitamins, and minerals, was only 35.7%. According to the Health Profile of West Java, the achievement of exclusive breastfeeding in 2016 in West Java was 46.4%. According to the LB3 Monthly Report, the achievement of exclusive breastfeeding in 2017 in Bogor City was 49.5%. Risesdas data in 2018 shows that breastfeeding coverage in Indonesia is 37.5%, and West Java, as one of the largest provinces in Indonesia, has a percentage of exclusive breastfeeding coverage of 37% in 2018 (4). The low coverage of exclusive breastfeeding is influenced by several factors. According to research results, the factors that influence exclusive breastfeeding are age, parity, and support from health workers (5). In addition, according to other studies, the factors that influence exclusive breastfeeding are education, work, and knowledge (6). The lack of support obtained by the mother can cause the failure of exclusive breastfeeding. Breastfeeding mothers, especially new mothers, often feel depressed four or five days after birth because breastfeeding problems begin to appear; for example, breast milk only comes out in small quantities (7).

From the results of other studies, it is stated that the inhibiting factors for mothers to give exclusive breastfeeding are attitudes that do not agree with exclusive breastfeeding, lack of motivation, many mothers experience breast swelling, lack of information, people closest to the subject, and less supportive society (8). The role of health workers regarding exclusive breastfeeding for passive respondents is 68%, and active respondents are 32%. Health workers are very influential on failure in exclusive breastfeeding (9).

The Indonesian government regulates the policy regarding the duration of exclusive breastfeeding, which was initially four months to 6 months. This policy has been stipulated in the Decree of the Ministry of Health Number 450/MENKES/SK/IV/2004. One of the decision contents stipulates that exclusive breastfeeding in Indonesia is given to infants up to the age of 6 months. It is recommended to continue until children are two years old by giving appropriate complementary feeding. In addition, the

government also issued a regulation on breastfeeding in Government Regulation Number 33 of 2012. The Government Regulation contains several policies for national and regional governments to implement advocacy and socialization of exclusive breastfeeding programs and foster, monitor, evaluate, and supervise implementation to achieve exclusive breastfeeding in all health facilities. These regulations and policies were made to increase the coverage of exclusive breastfeeding in Indonesia.

One of the approaches applied to increase the achievement of exclusive breastfeeding is to empower the community. Empowerment in the health sector aims to make people, individually, families, and groups or communities maintain and improve their welfare. Therefore, the community is empowered in the sense of maintaining and improving their health. This means that society must be given the ability to facilitate itself to live a healthy life.

As the smallest unit in society, the family needs to be empowered because the family has a role in developing, preventing, adapting, and correcting health problems found in the family. Besides that, why is family empowerment important? The family is the center of critical health decision-making and an effective forum and or channel for carrying out various health message efforts.

The family has a vital role in health services (services through a family approach), helping determine health problems to solve these health problems. This is related to the role of the family in maintaining and improving the health of each family member and or the health of the community as a whole in ensuring the success of health services.

Based on the above background, it is necessary to research the Intervention of Family Empowerment Models on the Pattern of Breastfeeding in the City of Bogor.

Methods

This research is quantitative research with a quasi-experimental design. This study uses a non-equivalent group design approach. The research subjects were grouped into the intervention group and the control group. The intervention group came from 5 Puskesmas areas where the achievement of exclusive breastfeeding was relatively low, namely the areas of Puskesmas Sindang Barang, Bogor Barat, Lawang Gintung, Pasir Mulya, and Bogor Selatan. Meanwhile, the control group

came from the Puskesmas where exclusive breastfeeding was relatively low, namely Puskesmas Cipaku. The time of the study started in June - September 2019.

The population in this study were all third-trimester pregnant women in Bogor City. The minimum sample size was calculated using a quasi-experimental design formula; namely, each group consisted of 20 subjects. The sampling technique was purposive sampling, i.e., pregnant women lived with their parents/in-laws/aunts and had toddlers who had no history of exclusive breastfeeding.

The implementation of this research was carried out in 5 stages. Stage I, making educational media which is developed in the form of a calendar that will be submitted to the mother through an enumerator (midwife) when the baby receives exclusive breastfeeding for up to 6 months and a video that will be submitted to the Head of the Nutrition Section of the Bogor City Health Office as a research partner to be broadcast. In the form of running text on the TV screen in the waiting room of the KIA Puskesmas.

Stage II, conducting training on enumerators with the participants being midwives and nutritionists in charge of the working area of the Puskesmas, which were selected based on the low level of exclusive breastfeeding coverage in Bogor City.

Stage III carries out a Sample Screening, where the sample is selected based on inclusion criteria. The family member lives in the same house as the sample and has a toddler history of not exclusive breastfeeding.

Stage IV, conducting the intervention, was given education in a family class with resource persons from the Research Partners Team for Nutrition at the Bogor City Health Office. This educational activity took place three times with a duration of 1 hour, and the implementation time was adjusted to the situation and conditions of the local community. One of the mothers/in-laws/husbands attended the family class activity as decision-makers in family health. The materials discussed were the concept of breastfeeding, breastfeeding patterns, and breastfeeding planning.

Stage V, Monitoring, is carried out in the neonate regarding breastfeeding patterns from birth to the present.

The data processing procedure is done by checking the completeness and rationality of all variable data. Before and after the intervention, data on breastfeeding patterns were calculated for the total value in the intervention and control groups. The non-parametric test with the

Wilcoxon test was conducted to analyze the difference in the average family knowledge about breastfeeding patterns before and after the intervention group intervention. Then a parametric test with T-dependent was conducted to analyze the difference in the average family knowledge before and after the intervention in the control group. The control group also carried out the non-parametric test with the Wilcoxon test. The group analyzed the difference in the average breastfeeding pattern before and after the intervention. The Mann-Witney test was carried out to analyze the effect of the intervention of the family empowerment model with knowledge about breastfeeding and breastfeeding patterns between intervention and control groups.

Results

1. Respondent Characteristic

Respondent characteristics (research subject) observed were age, education, and job.

Tabel 1. Respondent characteristics

Characteristic	Intervened Group	Controlled Group
Age		
Average	44,05	35,00
Standard Deviation	12,07	6,15
Education		
Low	12 (60%)	13 (65%)
High	8 (40%)	7 (35%)
Job		
Working	5 (25%)	18 (90%)
Housewife	15 (75%)	2 (10%)
Sex		
Female	17 (85%)	1 (5%)
Male	3 (15%)	19 (95%)

In the intervention group, the mean age was 32.5; 75% of educated high school and 80% work of housewives. While in the control group, the average age was 29.5; 85% education < high school and 75% housewife.

Pregnancy is when the mother is ready to decide whether to give exclusive breastfeeding to her child or not. Many factors influence mothers in deciding and implementing breastfeeding patterns, especially the mother's physical and psychological unpreparedness, lack of information and knowledge about the benefits of breastfeeding, lactation management, and matters related to breastfeeding. Basic Health Research (4).

Maternal age is one factor that influences the practice of exclusive breastfeeding. The research conducted by Ching and Chow 2010, found that age had a negative correlation with the mother's belief in breastfeeding (10). In the 2012 Yenisyiska study in the Lubuk Tarok Health Center, Sijunjung Regency, it was stated that non-exclusive breastfeeding for mothers who worked was 100%, while mothers who did not work it was only 44.7%.

2. Description of the Characteristics of Mother/ In-law/ Husband of Respondents

Families in the intervention group, mean age 44; education < high school 60% and occupation 75% housewife. Meanwhile, the family in the control group has an average age of 35; 65% education < high school and 90% work.

3. Description of Family Knowledge About Breastfeeding in the Intervention Group and Control

Table 2. Breastfeeding Knowledge

Knowledge About Breastfeeding	Intervened Group	Controlled Group
Before Intervention		
Average	60,90	70,65
Standard Deviation	6,96	11,16
After Intervention		
Average	65,70	70,15
Standard Deviation	8,65	10,63

Family knowledge about breastfeeding has increased after attending a family class from an average of 60.9 to 65.7.

4. Overview of Breastfeeding Patterns in the Intervention Group and Control Group

Tabel 3. Breastfeeding Patterns

Breastfeeding Patterns	Intervened Group	Controlled Group
Before Intervention		
Average	55,60	70,00
Standard Deviation	15,89	11,57
After Intervention		
Average	76,80	67,6
Standard Deviation	13,59	14,79

5. Results of Wilcoxon Test Analysis of Differences in Family Knowledge About Breastfeeding Before and After Intervention

Table 4. Wilcoxon Test Analysis Results

Group	N	Median (min-max)	p*
Knowledge Before	20	21(16-28)	0,000
Knowledge After	20	27 (24-35)	

*Wilcoxon Test

Based on Table 4. The results of the Wilcoxon test analysis showed that there was a significant increase in family knowledge about breastfeeding after attending Family Class.

Family support has a relationship with the success of exclusive breastfeeding to infants. Family support supports mothers who are motivated to give only breast milk to their babies until the age of 6 months, provide psychological support to mothers and prepare balanced nutrition for mothers (11). There is a significant relationship between the support of the mother's husband and exclusive breastfeeding in the working area of the Bungus Health Center (11).

6. Results of Analysis of Dependent T-Test on Differences in Family Knowledge about Breastfeeding in the Control Group

Table 5. Results of Dependent T-Test Analysis

Group	N	Average ± (standard deviation)	p*
Early Knowledge	20	70,65 ± 11,16	0,889
Final Knowledge	20	70,15 ± 10,63	

*T dependent Test

Based on Table 5. The results of the dependent T-test analysis showed no increase in family knowledge about breastfeeding in the control group, two measurements at the beginning and the end.

7. Results of Wilcoxon Test Analysis of Differences in Breastfeeding Patterns Before and After Intervention

Table 6. Wilcoxon Test Analysis Results

Group	N	Median (min-max)	p*
History of Breastfeeding Patterns	20	64 (24 – 80)	0,001
Current Breastfeeding Patterns	20	80 (56 – 96)	

*Wilcoxon Test

Based on Table 6. Wilcoxon test results, the current pattern of breastfeeding is significantly better than the previous breastfeeding pattern for toddlers after the family received education about breastfeeding in Family Class activities.

Research conducted by Ida in 2011 in the working area of Kemiri Muka Health Center Depok City stated that there was a significant relationship between family support and exclusive breastfeeding. One form of family support is providing assistance in materials such as money loans, physical assistance in the form of tools, or others that support and help solve problems. In overcoming the tension of family presence, it is essential to encourage mothers to increase their self-confidence and stabilize their emotions and provide great motivation for breastfeeding mothers.

8. Results of the Wilcoxon Test Analysis of Differences in Breastfeeding Patterns in 2 measurements in the Control Group

Table 7. Wilcoxon Test Analysis Results

Group	N	Median (min-max)	p*
History of Breastfeeding Patterns	20	70 (48 – 88)	0,643
Current Breastfeeding Patterns	20	67 (40– 96)	

*Wilcoxon Test

Based on Table 7 The Wilcoxon test analysis results showed no significant change in the pattern of breastfeeding between the previous history of breastfeeding and the current pattern of breastfeeding.

9. Results of the Mann Whitney Test Analysis of Differences in Family Knowledge About Breastfeeding between the Intervention Group and the Control Group

Table 8. Mann Whitney Test Analysis Results

Group	N	Median (min-max)	p*
Intervention Group Knowledge	20	66 (54 – 93)	0,765
Control Group Knowledge	20	67 (57– 95)	

*Mann Whitney Test

Based on Table 8. There was no significant difference between knowledge about breastfeeding in the intervention group and the control group. The results of the Mann-Whitney test analysis showed that there was no significant difference in knowledge about breastfeeding between the intervention group and the control group.

10. Differences in Breastfeeding Patterns between the Intervention Group and the Control Group

Table 9. Mann Whitney Test Analysis Results

Group	N	Median (min-max)	p*
Intervention Group Breastfeeding Patterns	20	66 (54 – 93)	0,765
Control Group Breastfeeding Patterns	20	67 (57– 95)	

*Mann Whitney Test

Based on Table 9 The breastfeeding pattern in the intervention group was better than the breastfeeding pattern in the control group but not statistically significant.

Conclusions

- Family Empowerment Model in the Form of Family Class, by developing media in the form of pocketbooks, booklets, calendars, and videos.
- There is a significant increase in Family Knowledge about breastfeeding after attending Family classes.
- There is a significant difference in breastfeeding patterns before and after the family joins the Family Class.

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Authors Contribution

All authors designed the study, Sri Mulyati MKes and Sri Wahyuni MPH completed the entire filed work. Fauzia Dj MKes input and analysis data. All authors contributed to writing the report of research and manuscript.

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