

Family-Center Approach (Fca) Model In Strengthening Breastfeeding Competencies In Primary Women

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Abstract

Introduction: Many factors significantly contribute to the success of exclusive breastfeeding, with the main determinants of the family-centered approach, which includes support from the partner, parents, and relatives who collectively play an important role throughout the breastfeeding journey. The purpose of this study is to assess the effectiveness of the family-center approach model in improving breastfeeding competence among primary women. **Methods:** We conducted a quasi-experimental design study using pre-test and post-test with a control group framework, involving 34 respondents who were selected through total sampling. The respondents consisted of primipara women who are currently exclusively breastfeeding and their family members. We distributed the respondents evenly into control and intervention groups. Data collection is carried out through a combination of questionnaires and observation checklists to collect comprehensive information. We used the Wilcoxon Test followed by the Mann-Whitney Test for statistical analysis, resulting in a value of $p < 0.000$ ($p < 0.05$). **Results:** These results show significant differences between the intervention and control groups. Higher competence was found in the intervention group with a mean value of 26.00 and a standard deviation value of 442.00 compared to the control group. **Conclusion:** These results show that the Family-Center Approach (FAC) model is effective in improving breastfeeding competence among primipara women.

Keywords: Family-Center Approach, Primipara, Exclusive Breastfeeding, Competence

INTRODUCTION

A fascinating nutrition problem of this decade, stunting, is one of the leading child malnutrition problems in developing countries(1). Stunting refers to disturbances in the child's growth and development process, which come from persistent malnutrition and recurrent infections. It is characterized by a body length or height that appears to fall below the threshold or "low height for age"(2). Chronic malnutrition during the first two years of life was identified as a significant factor that causes stunting. Currently, based on UNICEF data, the prevalence of stunting in Indonesia is still high, around 21.6%, exceeding the national target threshold of 14% by 2024(3).

An adequate way to effectively break the cycle of stunting involves the implementation of nutritionally targeted interventions during the first 1000 days of life(4). The first 1000 days of life consist of critical periods for growth and development, often marked by frequent nutritional challenges. Undoubtedly, this early phenomenon can have some adverse effects on a child's long-term health and well-being(5). Another significant approach to disrupting the cycle involves promoting and increasing exclusive breastfeeding, with a major emphasis on improving maternal competence in practicing breastfeeding(6).

According to data from district/city health authorities, the rate of infants receiving exclusive

breastfeeding in East Java province was 61.0% in 2020, showing a decrease from 68.2% in 2019(7). According to data from district/city health authorities, the rate of infants receiving exclusive breastfeeding in East Java province was 61.0% in 2020, showing a decrease from 68.2% in 2019(8).

Breast milk contains essential substances, including building, regulatory, and energy components(9). Exclusive breastfeeding has proven to be a viable strategy to create the foundation for a brighter and healthier generation in the future(10). Several studies have shown that children who do not receive exclusive breastfeeding face a 61 times higher risk of stunting compared to those who exclusively(4).

Ensuring that the baby receives enough milk during the breastfeeding process is very important(11). The mother's competence in breastfeeding is essential in providing babies with the energy and calories needed for their growth and development, contributing to weight gain, especially in primipara women(12).

The competence of primipara women in practicing breastfeeding is very important, because the more competent they are, the more beneficial results can be expected, including better knowledge of proper breastfeeding techniques and ensuring the baby receives adequate nutritional intake(13). Inadequate knowledge and low competence among mothers, especially among primipara women in the practice of breastfeeding, pose tremendous challenges. These obstacles can interfere with the smooth development of breastfeeding as initially anticipated and can cause additional problems to arise in the postpartum period(14).

Various factors contribute to the discontinuation of exclusive breastfeeding, including the experience of pain during breastfeeding, decreased milk production, the expiration of maternity leave, concerns about their body appearance, and a lack of support from their environment, especially from family members(15).

The success of exclusive breastfeeding programs is closely linked to various supporting factors, with family support from partners, parents, and relatives playing an important role in the breastfeeding process(16).

The family exerts an influence on the psychological well-being of mothers, affecting their mood and emotions, which can indirectly have an impact on the mechanism of breast milk production. The Family-Center Approach model can include supportive words, ministry actions that involve tasks, and ensuring adequate maternal nutritional intake(17). Lack of support from families has been shown to reduce the motivation of mothers to continue exclusive breastfeeding for their babies(18).

Improper breastfeeding positions and techniques can increase the risk of lactation-related problems, including cracked nipples, blocked ducts, and other challenges that can interfere with mothers in their breastfeeding practices. As a result, the baby may not receive a sufficient amount of nutrients from breast milk, which leads to an unoptimal distribution of beneficial substances and potentially results in inadequate maturation of organs and hormones, delayed psychomotor development and a lack of antibodies, increasing susceptibility to infections(19).

Considering the above statement, we would like to delve deeper into the effectiveness of the Family-Center Approach model in improving the breastfeeding competence of primipara women.

MATERIAL AND METHODS

We conducted this quasi-experimental study, utilizing pre-test and post-test with a control group design framework in Malang, East Java, and obtained respondents through the total sampling method. We select primipara postpartum mothers who are currently breastfeeding exclusively and their families who live in the work area of the Dinoyo Health Center from December 2023 to January 2024.

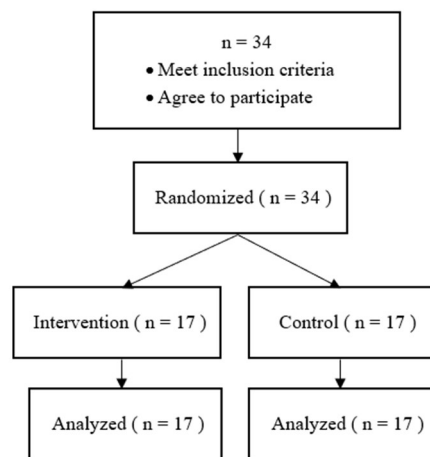
We have managed to collect a total of 34 respondents who met the inclusion criteria and then divide them into two groups: the intervention group and the control group, each consisting of 17 respondents. The inclusion criteria are primipara women who are currently exclusively breastfeeding, are not on medication prescribed by a doctor, and are 20 to 35 years old. Exclusion criteria involve mothers and their families who have had previous exposure or intervention related to exclusive breastfeeding. In addition, the research instruments used in this study include the Breastfeeding Self-Efficacy Scale-Short Form (BSES-ES) and an observation checklist. The researcher did not conduct validity tests and reliability tests because the research instruments were taken directly from the Syafitri (2021) study that had been tested previously. Data collection involves door-to-door visits to distribute questionnaires and observation checklists, ensuring that all respondents

receive the same research instruments.

In the intervention phase, the intervention group was given a pre-test and evaluated how the mother was breastfeeding her baby. Furthermore, breastfeeding mothers' families are given a *family-center approach* model following the protocol that has been prepared for 7 (seven) days. On the 7 (seven) day, breastfeeding mothers are given a post-test sheet to fill out and again evaluated when breastfeeding their babies.

In contrast to the control group, at the time of giving the intervention, they were still given a pre-test and evaluated how the mother was breastfeeding her baby. However, the *family-center approach model* was not given instead a booklet focused exclusively on breastfeeding. Breastfeeding mothers are given the freedom to ask questions about breastfeeding. On the 7 (seven) day, breastfeeding mothers are given a post-test sheet to fill out and again evaluated when breastfeeding their babies.

Here is a participant flowchart (consort flowchart)



All collected data underwent statistical analysis using the Wilcoxon Test, followed by the Mann-Whitney Test for further assessment.

RESULT

The data collection procedure for this study involved the use of various research instruments, including the Breastfeeding Self-Efficacy Scale-Short Form (BSES-ES) and the assessment of respondents while breastfeeding their babies before the intervention was implemented.

Furthermore, we implemented the Family-Center Approach (FCA) regarding exclusive breastfeeding for respondents' families, using a checklist of standard operating procedures and a booklet. After the implementation of the intervention, we reviewed the competencies of the respondents using the same questionnaire and assessed how they breastfed their babies.

1. Respondent Characteristics

Table 1. The distribution of respondents' characteristics based on their age, education and employment status within the work area of Dinoyo Public Health Center, Malang City, East Java

Characteristics	Intervention Group		Control Group	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Age (years)	13	52,9	5	29,4

	14	29,4	9	52,9
	7	17,6	3	17,6
Education				
Primary and Middle School	0	0,0	0	0,0
Secondary School	20	52,9	12	70,6
Higher Education	14	47,1	5	29,4
Employment Status				
Unemployed	7	23,5	3	17,6
Employed	17	76,5	14	82,4

According to Table 1, the majority of respondents in the intervention group were aged 20-25 years (52.9%), while in the control group, the dominant age range was 26-30 years (52.9%). Regarding their level of education, 52.9% of respondents in the intervention group had a secondary school education, and the control group showed similar results, with 70.6% of respondents having completed secondary school. Looking at their employment status, in the intervention group, 76.5% of respondents were unemployed, and so was the control group, with a slightly higher outcome, 82.4% of respondents were unemployed.

1. Breastfeeding Competence of Primipara Women Before and After Being Given Family Center Approach Model Intervention

Table 2. Primiparous women' Breastfeeding Competency During the Intervention Phase Before and After Filling the *Breastfeeding Self-efficacy Scale-Short Form (BSES-ES)*

Competency	Intervention Group				Control Group			
	Before		After		Before		After	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Low	2	8,2	17	100	5	14,3	17	100
Medium	15	47,6	0	0	12	36,6	0	0
High	17	100	17	100	17	100	17	100

As illustrated in Table 2, before the implementation of the Family-Center Approach (FAC) intervention, the breastfeeding competence of primipara women in the intervention group, assessed using the BSES-ES Form, was mostly low (88.2%). After the FAC intervention, there was a significant escalation, reaching 100% to be highly competent. Similarly, in the control group assessed using the BSES-ES Form, the initial competency was low (70.6%). After being exposed to the booklet, the majority of respondents also showed high competence, reaching 100%.

Table 3. Competence of Breastfeeding Primipara Women During the Intervention Phase Before and After Observed

Competency	Intervention Group				Control Group			
	Before		After		Before		After	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%

0	0	15	1,2	0	,0	7	.1,2
17	10	2	,8	17	10	10	8,8
17	10	17	10	17	10	17	.00

As presented in Table 3, before the implementation of the Family-Center Approach (FAC) intervention, the observed breastfeeding competencies of primipara women in the intervention group were all low (100%). After the FAC model intervention, the majority of mothers showed an increase in competence to a high level (88.2%). Slightly aligned with the intervention group, the control group showed low competence before exposure to the booklet (100%), and surprisingly, the results remained low (58.8%) at observation after exposure to the booklet.

2. Analysis of the Effectiveness of the Family-Center Approach Model in Improving the Breastfeeding Competence of Primipara Women

Table 4. Mann-Whitney Test Result for the Improvement in Primiparous women' Breastfeeding Competency

	Group	N	Mean Rank	Sum of Ranks	p-value
Competency Improvement	Intervention	17	26.00	442.00	0,000
	Control	17	9.00	153.00	
	Total	34			

Table 4 illustrates the statistical analysis using the Mann-Whitney test, showing that those who received the Family-Center Approach (FCA) intervention showed a higher improvement in competence (mean rating 26) compared to the control group without the FAC intervention (mean rating 9). Furthermore, the p-value obtained at 0.000 ($p < 0.05$) shows statistically significant results. This significance supports the approval of the hypothesis, suggesting that the FCA model effectively improves the breastfeeding competence of primipara women.

DISCUSSION

The characteristics of primipara women who are currently practicing exclusive breastfeeding in this study include their age, employment status, and education level. The majority of respondents in the intervention group ranged from 20-25 years old (52.9%), and in the control group ranged from 26-30 years old (52.9%). A number of studies have shown that the age of 20-35 years is the safest phase to undergo conception, postpartum and lactation(20). This age is a productive stage for a person to gain a lot of experience and skills; In addition, their readiness and enthusiasm for lactation peaks at this age, which directly affects their basic breastfeeding competencies(19)

In this study, respondents in the intervention and control groups showed that they graduated from high school, 52.9% and 70.6%, respectively. Education level plays an important role in shaping a person's perspective and behavior towards health information(21). A person with a higher level of education will likely think more rationally compared to those who do not pursue higher education. Lower levels of education can have an impact on maternal breastfeeding competence. Highly educated mothers are more likely to seek breastfeeding information to a larger scope with vigor(22). The majority of respondents in both the intervention and control groups were unemployed, consisting of 76.5% and 82.4%, respectively.

Unemployed mothers are more likely to engage in exclusive breastfeeding compared to working mothers. Thus, they can continue breastfeeding for up to 6 months(19). This statement is consistent with research findings that show non-working or unemployed mothers are 3.5 times more likely to engage in exclusive breastfeeding compared to working mothers(23).

This study showed an increase in breastfeeding competence among primipara women in both the intervention and control groups. In the intervention group, there was an increase before and after the implementation of the Family-Center Approach (FAC) intervention, while in the control group, an increase was observed after exposure to the booklet. However, the results of the Mann-Whitney test revealed a significance value of 0.000, which is less than 0.05. The analysis showed that the highest increase in competence occurred in the intervention group (mean rank 26.00) compared to the control group (mean rank 9.00).

This implies that the Family-Center Approach (FAC) model intervention has the potential to bring positive changes and improve maternal competence in breastfeeding, making them more proficient throughout the breastfeeding journey compared to those who do not receive FAC interventions. Supportive interventions such as education and counselling as well as home visits are suitable strategies to promote breastfeeding for primipara mothers (Dorfman et al. 2021).

Mothers play an important role in the growth and development of their babies(5). The Family-Center Approach (FAC) model, as proposed by the researchers, stimulates an improvement in competency in practicing breastfeeding. To restate the information above, the intervention of the Family-Center Approach (FAC) model aims to prevent the occurrence of stunting during the first 1000 days of life through a targeted strategy, namely exclusive breastfeeding(24).

Undernutrition during the first 1000 days of life has detrimental consequences for the quality of life in infants and children. The poor nutritional status during the conception phase and early stages of life heightens the risk of stunting(25).

Some information gathered from various sources indicates that stunting is more prevalent in children who did not receive exclusive breastfeeding during their early stages of life(26). This argument aligns with other studies highlighting a correlation between exclusive breastfeeding practices and the occurrence of stunting in children, revealing a 61 times higher likelihood of experiencing stunting among those who did not receive exclusive breastfeeding compared to those who did. We can prevent the occurrence and reduce the prevalence of stunting by promoting and practicing exclusive breastfeeding in accordance with the guidelines provided by the World Health Organization(27).

The Family-Center Approach (FAC) model is specifically designed to engage the family members of primiparous women who are currently practicing exclusive breastfeeding. The aim is to instil confidence and motivation in mothers throughout the breastfeeding journey. Through the implementation of the FAC model, mothers have the opportunity to gradually reshape their attitudes and behaviours, fostering a heightened awareness on the importance of practicing exclusive breastfeeding. In turn, it will contribute to the attainment of a healthy well-being for both the mothers and their infants.

The implementation of the model is carried out individually, adhering to the specified procedures of the FAC intervention, providing informational booklets and conducting demonstrations in breastfeeding practices. The researchers opted to approach this model individually as it fosters greater confidentiality and ensures better understanding during the intervention. Additionally, the informational booklet offers a visually engaging format, incorporating graphic content that aids mothers and their families in better comprehending the information and fostering a clearer visualization(28).

Infants who were fed formula aged 0-6 months had a five times higher risk of inadequate growth and development compared to those who breastfed exclusively(29). Selain itu, penelitian secara konsisten menunjukkan bahwa ASI adalah sumber nutrisi yang paling cocok dan ideal untuk bayi, selaras dengan kebutuhan spesifik mereka untuk tumbuh kembang yang optimal. Seperti yang ditetapkan sebelumnya, praktik pemberian makan yang tidak tepat dan kekurangan gizi diidentifikasi sebagai faktor utama yang bertanggung jawab atas stunting(30). A model intervention of the family-center approach to breastfeeding in maternal families was identified as a powerful measure to prevent failure or discontinuation of exclusive breastfeeding among primary women, especially those who may lack practical experience.

The strength of this study is that by involving family members in the breastfeeding process, it can provide emotional, practical, and psychological support to primipara mothers. Support from family can reduce stress and increase mothers' confidence in breastfeeding.

CONCLUSION

Notable differences exist in maternal breastfeeding competence before and after the implementation of the Family Centre Approach model intervention, as illustrated by a statistically significant p-value of 0.000 ($p < 0.05$). The findings show that the Family-Center Approach model has proven to be an effective strategy in improving the competence and breastfeeding skills of primipara women.

SUGGESTION

In the next study, we recommend conducting a thorough assessment and detailed explanation of the effect of the Family-Center Approach model in improving the competence of mothers or caregivers in providing complementary foods based on the need to reduce the risk of stunting in infants and children.

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