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Original Article

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The effectiveness of family-centered maternity care-based education on family support and self-efficacy of postpartum mothers in breastfeeding

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Abstract:
This study aimed to evaluate the effect of Family-Centered Maternity Care (FCMC)-based education on breastfeeding self-efficacy and family support among postpartum mothers. A quantitative study with a quasi-experimental pretest–posttest control group design was conducted. The study involved 52 respondents who were divided into intervention and control groups. Family support was measured using an adapted version of the Nasution Family Support Questionnaire, while breastfeeding self-efficacy was assessed using the Breastfeeding Self-Efficacy Scale–Short Form (BSES-SF). Data were analyzed using paired t-tests and independent t-tests. The findings demonstrated that FCMC-based education significantly improved breastfeeding self-efficacy and family support among postpartum mothers. Statistical analysis showed a significant effect of the intervention on breastfeeding self-efficacy ($p = 0.004$) and family support ($p = 0.000$). The results indicate that educational interventions involving family participation can strengthen maternal confidence in breastfeeding and enhance family involvement in postpartum care. Therefore, the implementation of Family-Centered Maternity Care-based education is recommended as an effective strategy to improve maternal and family readiness in supporting successful breastfeeding practices during the postpartum period.

Keywords:
education, family-centered maternity care, family support, self-efficacy

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INTRODUCTION

Breast milk (breast milk) is a white fluid secreted by a woman's mammary glands through lactation (Widyastutik et al., 2021). Breast milk also provides nutrition, hormones, immune system components, growth, anti-allergenic, and anti-inflammatory properties (Vargas, 2023). According to Government Regulation Number 33 of 2022 on exclusive breastfeeding, it is breast milk given to infants from birth for 6 months without any additional food or drink (except medication, vitamins, and minerals) (Girsang et al., 2021). Breastfeeding is the process of providing breast milk to infants, and it fosters a close bond of affection between mother and infant (Siregar, 2021). Low rates of exclusive breastfeeding threaten child growth and development, impacting the quality of life of children as the

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nation's next generation (Lehan et al., 2023). Breastfeeding is a crucial factor in improving health and can contribute to stunting (Napitupulu & Karota, 2022). Infants who are not exclusively breastfed are at greater risk of illness than those who are (Siregar et al., 2022). Postpartum mothers' failure to exclusively breastfeed is often linked to insufficient milk production, a lack of understanding of proper breastfeeding techniques, and a lack of family support for breastfeeding (Nasution et al., 2023). The postpartum period is a crucial time because it is during this phase that several changes occur in the mother (Dewi et al., 2023), both physiological and psychological (Ririn et al., 2022).

Postpartum maternal self-efficacy is a mother's belief in her ability to breastfeed her baby and determines whether she chooses to breastfeed, how much effort it will require, her ability to improve, and how she emotionally responds to breastfeeding difficulties (Shafaei et al., 2020). The benefits of self-efficacy include increasing early breastfeeding initiation rates, increasing breastfeeding duration, reducing stress and anxiety, and enhancing satisfaction and well-being (Buek et al., 2022).

The assistance of health workers, especially community nurses, is essential in monitoring mothers, babies, and families at home. Efforts to optimize education include involving families (Li et al., 2021). The family's role is crucial for mothers in addressing physiological and psychological changes as they fulfill their roles (Lufhiani et al., 2022). Strategies for breastfeeding include providing lactation education based on family-centered maternity care (FCMC). Family-centered maternity care (FCMC) education encompasses the provision of care to mothers and their families, incorporating it into the family life cycle as a normal and healthy event (Rachmawati et al., 2021).

Several previous studies, such as those conducted by Rahmayanti et al. (2021), showed that a procedure involved providing online education to postpartum mothers and families through an intervention delivered four times a week for one week via the Zoom cloud meeting application. The online education was provided due to the COVID-19 outbreak at the time of the study, which limited the research. Research by Rofiqoh et al. (2020) found that education influenced family support for breastfeeding. The intervention, in the form of lactation management education, was provided to mothers and their families three times a month during the third trimester of pregnancy. The education used flipcharts. This education increased families' knowledge of lactation management, making them feel more important in caring for their breastfeeding family members.

This study differs from previous studies in several ways, including the adaptation of the educational material to the conditions and needs of respondents in the Community Health Center Work Area. The method used is a direct lecture with booklets and videos. The sample used is pregnant women aged 36-40 weeks. The purpose of this study is to analyze the effectiveness of family-centered maternity care-based education on family support and self-efficacy in postpartum mothers in breastfeeding.

METHOD

The research used a quantitative, quasi-experimental design with a pretest and posttest with a control group. This study was conducted at the Sagea Community Health Center (Puskesmas) from January to March 2025. A sample of 52 respondents was divided into 26 intervention groups and 26 control groups. The sampling technique used was consecutive sampling, with inclusion

Volume 02 Number 01 (May 2026)
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criteria being pregnant women in their ninth month (36-40 weeks) of gestation, living with their family (husband/parents/in-laws/other relatives), having no serious complications, participating in the Puskesmas work program, and being willing to remain in the Sagea Community Health Center's work area after delivery. The intervention group received lactation education four times.

The procedure for implementing lactation education in this study was: Session 1 (36-40 weeks of gestation), conducted a pretest and provided education on the concept of lactation. Session 2 (4 days after birth) provided education on techniques for increasing breast milk production. Session 3 (day 7 after birth) provided educational material on increasing family support and maternal self-efficacy after childbirth. Session 4 (day 10 after birth) included a post-test. The control group received no intervention and only followed the work program conducted by the Community Health Center. Education was provided through discussion, lectures, and face-to-face sessions, using educational media such as laptops, booklets, and videos on successful breastfeeding. The family support instrument was a modification of Nasution's (2007) support questionnaire, and the self-efficacy instrument was the Breastfeeding Self-Efficacy Scale-Short Form (BSES-SF) from Dennis (2003). Both instruments have passed the validity and reliability testing stages. Data processing used SPSS with data analysis using the Paired T-Test and Independent T-Test.

RESULT

Table 1. Frequency Distribution of Socio-Demographic Characteristics (n=52)

Characteristic	Intervention Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
Age (years)				
< 17	1	3.8	1	3.8
17 - 25	9	34.6	4	15.4
26 - 35	14	53.8	17	65.4
36 - 45	2	7.7	4	15.4
Education				
Not education	1	3.8	1	3.8
Elementary School	0	0	1	3.8
Junior High School	5	19.2	6	23.1
Senior High School	19	73.1	15	57.7
Bachelor	1	3.8	3	11.5
Occupation				
Not work	24	92.3	23	88.5
Self-employed	1	3.8	0	0
Employes	1	3.8	1	3.8
Laborer	0	0	2	7.7
Family Type				
Nuclear family	2	7.7	7	26.9
Extended family	24	92.3	19	73.1

Table 1 shows 52 respondents, divided into 26 in the intervention group and 26 in the control group. Most mothers in the intervention group were aged 26–35 (53.8%), with 19 respondents having a high school education (73.1%), unemployed (24 respondents), and extended family (24

Volume 02 Number 01 (May 2026)
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respondents) in the control group. Meanwhile, most mothers in the control group were aged 26–35 (65.4%), with 15 respondents having a high school education (57.7%), unemployed (23 respondents), and extended family (19 respondents) in the control group.

Table 2. Differences in Family Support Before and After Family-Centered Maternity Care-Based Educational Intervention (n = 52)

Group	N	Pre-test Mean ± SD	Post-test Mean ± SD	Mean Difference	p-value
Intervention	26	88.96 ± 13.601	107.19 ± 9.300	18.231	0.000
Control	26	82.54 ± 11.176	92.50 ± 2.614	9.962	0.002

Table 2 shows the results of the paired t-test, indicating that the mean score for the intervention group was 88.96 on the pretest and 107.19 on the posttest. Meanwhile, the mean score for the control group was 82.54 for the posttest and 92.50 for the pretest. The score range was 34-136. This indicates an increase in the posttest in both groups.

Table 3. Effectiveness of Family-Centered Maternity Care Education on Family Support Between the Intervention and Control Groups (n=52)

Family Support	Mean	SD	t	Significant
Intervention	107.19	9.300	3.844	0.000
Control	92.50	13.327		

From Table 3, the independent t-test yielded a p-value of 0.000 (<0.05), indicating that Family-Centered Maternity Care-based education is effective in increasing family support for postpartum mothers in breastfeeding.

Table 4. Differences in Self-Efficacy Before and After Family-Centered Maternity Care-Based Educational Intervention (n=52)

Group	N	Pre-test Mean ± SD	Post-test Mean ± SD	Mean Difference	p-value
Intervention	26	33.69 ± 5.774	39.65 ± 4.345	-5.962	0.000
Control	26	31.04 ± 4.911	35.00 ± 6.585	-3.962	0.016

Table 4 shows the results of the paired t-test. The mean scores for the intervention group were 33.69 on the pretest and 39.65 on the posttest. Meanwhile, the control group's mean scores were 31.04 on the pretest and 35.00 on the posttest. The score range was 12-48. This indicates an increase in the posttest in both groups.

Volume 02 Number 01 (May 2026)
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Table 5 The Effectiveness of Family Centered Maternity Care-Based Education on Self-Efficacy Between the Intervention Group and the Control Group (n=52)

Self-efficacy	Mean	SD	t	Significant
Intervention	39.65	4.345	3.008	0.004
Control	35.00	6.585		

From Table 5, the independent t-test yielded a p-value of 0.004 (< 0.05), indicating that family-centered maternity care-based education is effective in increasing family support for postpartum mothers in breastfeeding.

DISCUSSION

The paired t-test results showed that the intervention group's mean score was 88.96 on the pretest and 107.19 on the posttest. Meanwhile, the control group scored 82.54 for the posttest and 92.50 for the pretest. The score range was 34-136. This indicates an increase in the posttest in both groups. This aligns with Rafiqoh's (2020) study, which found that the intervention group received lactation management education for mothers and their families, while the control group received none. The mean family support for the control group was 61.43, and for the intervention group, 68.10. This indicates a difference in the mean values between the two groups. The p-value was 0.001 (< 0.005), indicating that lactation management education significantly increased family support for mothers during breastfeeding.

Providing lactation management education to families will increase family support for mothers during breastfeeding. This increase in family support occurred because the respondents in both groups were aged 25-45. This is a productive age group capable of carrying out various activities. Both groups were unemployed and therefore had ample free time to breastfeed. Both groups lived in large families, allowing more family members to assist mothers in breastfeeding their babies.

The results of this study also align with those of Supliyani et al. (2022), which explained a difference in mean values between the intervention group (17.04) and the control group (9.454), with the intervention group being higher. The p-value was 0.000 < 0.05, indicating a significant difference in family support between the family-centered care group and the control group. Providing interventions to families on the topic of lactation management can foster family support for mothers in breastfeeding. Family support includes information about breastfeeding, emotional support, and motivation to breastfeed, as well as increasing mothers' confidence in fulfilling their role as mothers.

The study showed that most mothers in the intervention group (92.3%) lived with their extended family, while the control group (73.1%) lived with their extended family. This research is supported by Ramona T. Merner's nursing theory. Fulfilling the role of motherhood requires interaction between the mother, baby, and father (the closest family member) living in the same household. The family must be able to provide full support to the mother so she can fulfill her role and ensure successful breastfeeding.

This study disagrees with the findings of Herlianty et al. (2023), who reported no relationship between family support and breastfeeding (p-value = 0.278 > 0.05). Most families (76%) reported

Volume 02 Number 01 (May 2026)
p-ISSN: 0000-0000
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poor family support, which is due to a lack of knowledge about lactation management. Families are busy with various activities, preventing them from participating in and seeking information about lactation management. This lack of knowledge results in low family support across all dimensions. For example, low informational support can lead families to advise mothers to provide supplementary feeding for their babies.

This study showed that the intervention group's mean pre-intervention score was 33.69 and post-intervention score was 39.65. The control group's pre-test score was 31.04 and post-test score was 35.00, with a range of 12–48. This indicates that self-efficacy scores in the intervention group were higher after the family-centered maternity care-based educational intervention than in the control group. A p-value of 0.004 <0.05 indicates that family-centered maternity care-based education is effective in increasing postpartum mothers' self-efficacy in breastfeeding. The results of this study align with Rahmayanti's (2021) study, which found that postpartum mothers' self-efficacy in breastfeeding increased from 41 before education to 59.8 after education, an 18.8-point increase. The p-value was 0.000 <0.05, indicating a significant effect of online family-centered maternity care education on postpartum mothers' self-efficacy in breastfeeding. Self-efficacy strongly influences behavior. Someone with high self-efficacy in acquiring skills and performing tasks will be better prepared, work harder, and persevere in the face of difficulties.

According to research by Wulandari and Susilawati (2021), the early postpartum period (24 hours to 1 week) is a phase that requires special attention to uterine involution. Under normal circumstances, important considerations include the absence of bleeding, foul-smelling lochia, or fever, adequate food and fluid intake, and the ability to breastfeed effectively. The psychological changes a mother experiences after childbirth consist of three phases: "Taking In," "Taking Hold," and "Letting Go." During the "Taking In" phase, the mother focuses on meeting personal needs such as fluids, food, rest, and sleep. After giving birth, the mother shares the birth process with those closest to her as a coping mechanism (Susanti et al., 2020).

Providing information during this phase is crucial and should be repeated, as mothers often feel anxious about their role. During the "Taking Hold" phase, mothers demonstrate interest in caring for their babies and require support. In this phase, the mother demonstrates her commitment to her own self-care and to her baby's. This phase begins at the tenth stage. Finally, the "Letting Go" phase, during which the mother adapts to her baby's role, increasing independence and self-efficacy. Family-centered maternity care (FCC) is an approach to lactation management education for mothers that provides integrated care for women and their families throughout pregnancy, childbirth, the postpartum period, and infant care. The education program is conducted over four sessions, starting at 9 months of gestation (36-30 weeks) and continuing through the 10th day postpartum. The media used in this study were booklets and videos.

This educational program aligns with Pilus et al.'s (2022) findings, which indicate that although the pregnant women in their study had received several prenatal visits before receiving the education, the information they received was inadequate. Therefore, re-education is necessary for pregnant women, continuing after the postpartum period. The concept of family-centered maternity care provides care for the mother and family from pregnancy through childbirth, postpartum, and infant care. The educational period in this study was the early postpartum period.

Volume 02 Number 01 (May 2026)
p-ISSN: 0000-0000
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CONCLUSION

The conclusion from this study is that family-centered maternity care education is effective in increasing family support and postpartum mothers' self-efficacy in breastfeeding. It is recommended that health services expand the educational program beyond focusing solely on mothers. Family participation in education will increase knowledge, support, and self-efficacy in postpartum mothers, enabling mothers to more easily achieve their role as mothers.

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