



The effectiveness of simulation health education to mother breastfeeding skill between two groups in rural area of Riau, Indonesia[☆]



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Abstract

Objective: To evaluate the effect of health education by simulation for improving breastfeeding mother's skill in rural area in Riau.

Methods: This study was quasi experimental posttest-only control design. Purposive sampling was used to recruit 26 mothers who have breastfeeding experience in Posyandu (child and mothers health post) in Perambahan village as rural area in Riau, Indonesia. Thirteen respondents as intervention group and 13 respondents as control group in this study. Two weeks after implementing the breastfeeding educational through simulation technique in the intervention group, observed checklist to assess mother skill was completed by researcher.

Results: Fifty-three point eight percent of respondents were 20–35 years old, 80.8% mothers education level were low education in junior and senior high school level and 96.2% of them did not have any formal job outside at the home. There was a significant of mean difference in the breastfeeding mother's skill between intervention and control groups, 7.0 and 4.5 respectively ($p < 0.01$).

Conclusions: Health education technique was important thing to increase the breastfeeding mother's skill. The simulation is appropriate as one of the methods in health education for mothers.

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Introduction

Breastfeeding is the main food for the baby. The benefits of breastfeeding to infant health as well as the society in general are well documented. Breast milk contains nutrients, at specific percentages, needed for the growth and development of infants. Consequently, breastfeeding is the main source of nutrition for babies.^{1,2} In the same vein, breastfeeding has been associated with lower rates of gastrointestinal, respiratory, and urinary tract infection and less atopic illness during the first year. Moreover, supplying the complementary food before 6 months of baby age is correlated to child undernutrition.^{3,4}

The World Health Organization (WHO) recommends Exclusive Breastfeeding (EBF) for the first six months of a baby's life and continuation of the breastfeeding for up to two years.⁵ Despite the fact that the importance of breastfeeding is well known throughout the world, many mothers from both developing and developed countries stop breastfeeding before the WHO recommended. It was recorded by UNICEF that only 38% of all infants born in developing world got exclusive breastfeeding in the first six months of their life and that majority of the mothers provide alternative food supplements for their babies under six months.⁶ Indonesia, as a developing country, is not excluded from these problems. A study carried out on Pekanbaru, one of the urban areas in Indonesia, shows that majority of nursing mothers in the area gave some form of complementary food to their babies under 6 months because they feel that giving them only breast milk is not enough.⁷

In the past two decades, the role of maternal self-efficacy in the initiation and during the process of breastfeeding has been increasingly shown to be of great importance. A high maternal self-efficacy results in longer duration of breastfeeding by mothers because of the confidence they have in its continuity. This is confirmed by different studies that have shown that there is a positive correlation between maternal self-efficacy and the duration of breastfeeding.^{8,9} There is possible extension of this duration when mothers receive appropriate nursing interventions, continuing support and evaluation which can be in form of educational programs that are introduced in order to promote breastfeeding. According to a study by Pugin et al.,¹⁰ providing breastfeeding skill-based education to expectant mothers before birth increases breastfeeding rate. It emphasises that early introduction of appropriate and effective interventions will also help mothers achieve the recommended six months exclusive breastfeeding.

The findings of the research show that mothers that received prenatal education experience an increase in the duration of breastfeeding as well as the skills and knowledge involved in the process. However, it was reported that despite the efforts of Indonesia government in promoting breastfeeding, the EBF rate is still lower than expected.¹¹ A study carried out in Riau, a rural area of Indonesia, shows that the prevalence of exclusive breastfeeding was only 30.8% in the area and the major reason cited by mothers is that they feel that breast milk only cannot satisfy infants in their first six months.¹² Moreover, the study also reveals that most of the mothers engage in wrong breastfeeding techniques.

The study carried out in Indonesia show that breastfeeding skill is one of the most important factors needed in achieving a successful EBF practice. This study is aimed at evaluating the effect of using simulation technique of health education to improve breastfeeding skills for mothers in rural area of Riau.

Method

This study made use of a quasi-experimental posttest-only control design. The research was conducted between July and September 2018. Purposive sampling was used to select 26 mothers who have had breastfeeding experience in Posyandu (child and mother's health post) in Perambahan village as rural area in Riau, Indonesia. Thirteen of the selected respondents were used as intervention group while the remaining thirteen respondents were used as the control group for the research. The observation sheet used in the research contained 8 breastfeeding techniques which served as a guide in assessing the breastfeeding skills of these mothers. After the simulation technique had been implemented in the intervention group for two weeks, the observation sheet was used to assess the breastfeeding skills of the mother. Independent *T*-test was applied in this study to compare the difference between the mean of the 2 groups.

Results

The result of the research showed that 53.8% of the 26 respondents were in the reproductive age of 20–35 years old with senior high school (42.3%) as their highest level of education. It was also discovered that majority of the respondents were housewives (96.2%) and that 80.8% of their family income were below the city minimum income for a month. Majority of the mothers, represented by 88.5% were

Table 1 Socio-demographic characteristics of mothers.

Characteristics	Frequency	Percentage (%)
Age		
25–35 y.o.	14	53.8
>35 y.o.	12	46.2
Education		
Elementary	4	15.4
Junior high	10	38.5
Senior high	11	42.3
University	1	3.8
Working		
House wife	25	96.2
Teacher	1	3.8
Family income^a		
<IDR 2.516.000	21	80.8
≥IDR 2.516.000	5	19.2
Living with		
Nuclear family	23	88.5
Extended family	3	11.5

^a Based on city minimum income a month.

Table 2 Mother breastfeeding skill between intervention and control group after intervention.

Mother skill	Control group		Intervention group		Total	
	N	%	N	%	N	%
Not good	8	30.8	5	19.2	13	100.0
Good	5	19.2	8	30.8	13	100.0

Table 3 The difference mean of mother's breastfeeding skill between intervention and control group after simulation health education.

Respondent group	N	Mean	SD	Min	Max	p value
Intervention	13	7.00	0.913	6	8	0.000
Control	13	4.54	1.330	2	6	

reported to be living in a nuclear family circumstances as shown in [Table 1](#).

[Table 2](#) shows that the number of mothers that performed good breastfeeding skills were lower in control group, 5 respondents, compared to the 8 respondents recorded in the intervention group after the intervention procedures.

Furthermore, [Table 3](#) shows that the mean for breastfeeding skill for mothers in intervention group was 7.00 (SD 0.913) while a mean of 4.54 (SD 1.330) was observed for the control group after the simulation technique was used in educating them. A mean difference with *p* value of 0.000 was discovered between the 2 groups after the intervention.

Discussion

The result of this research shows that the use of simulation technique of health education is an appropriate method of intervention that can be use in increasing breastfeeding skill of mothers. This is supported by the higher percentage of 30.8% recorded by the use of the method for the intervention group compared to the 19.2% recorded by the control group. A difference was also observed in the skill category of the mothers in the two groups after the intervention procedure.

Many factors have been discovered to be the cause for the inability of mothers to carry out exclusive breastfeeding successfully for 6 months and breastfeeding skill has been observed to be one of them. Previous studies have revealed that despite the advantages offered by breast milk to infants, EBF is not popular among mothers. Mothers have been found to be feeding their babies with other foods thinking that breast milk may not be sufficient for them.⁷ This thought and reasoning have been associated with the lack of knowledge about breast milk by mothers. Another study also revealed that poor feeding techniques could be the reason why mothers failed to engage in EBF.¹²

Failure of adequate breastfeeding has been observed to be caused by latch on mistakes as well as wrong positioning of babies during the process. This results in decreased production of milk by the breast and, consequently, leads to early termination of exclusive breastfeeding. This can be rectified through appropriate interventions such as the simulation technique employed in this research. This has been established by the results of this research which show that

the intervention has a significant effect on the breastfeeding skills of mothers with a *p* value <.01.

The research shows that simulation technique makes it possible for participants to get a real understanding of an education activity through the use of visual demonstration. This is supported by a research conducted by Wardani.¹³ This study result showed that majority of the mothers only as housewife and they have low level of education, the demonstration method was very influential in increasing their rate of absorption and interest in learning. It can be deduced that using counseling kit in health education can optimize the learning quality of participants.

Lack of breastfeeding knowledge and skill make mother is easy to supply the complementary feeding for their babies.¹⁴

Conclusion

The use of simulation technique is appropriate in increasing the breastfeeding skills of nursing mothers. This is important because the use of good breastfeeding skill contributes to improvement in the rate of EBF in Indonesia.

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