

ORIGINAL ARTICLE

Effect of Seven-contact Breastfeeding on the Knowledge, Motivation, and Ability of Breastfeeding during the First Eight-weeks Postpartum

Farida Linda Sari Siregar, Siti Saidah Nasution

Department of Maternity and Pediatric Nursing, Faculty of Nursing, Universitas Sumatera Utara, Medan, Indonesia

ABSTRACT

Introduction: A minimum of seven-contacts with health personnel is required to successfully breastfeed for six months exclusively. Furthermore, non-exclusively breastfed babies have a six-fold risk of dying in the first year, increased susceptibility to disease, and cognitive loss. This study aims to determine the effect of the seven-contact program on the knowledge, motivation, and mothers' ability to breastfeed at 8 weeks postpartum. **Methods:** A quasi-experimental study was conducted from July to December 2020. About 37 samples of mothers with a gestational age of 28 weeks at the Maternity Clinic in Medan were selected using the purposive sampling technique. The data were obtained from the questionnaires and observation sheets and analyzed using the paired t-test. **Results:** The results showed that knowledge, motivation, and mothers' ability to breastfeed were significantly different before and after the seven-contact breastfeeding intervention with a p-value of $0.001 < 0.005$. **Conclusion:** Seven-contact breastfeeding intervention increases pregnant women's knowledge, motivation, and ability to breastfeed during the first eight weeks after delivery. Therefore, it is necessary to encourage pregnant women to apply the Seven-contact Breastfeeding to improve and support their journey.

Malaysian Journal of Medicine and Health Sciences (2023) 19(2):119-123. doi:10.47836/mjmhs19.2.18

Keywords: Seven-contact breastfeeding, Knowledge, Pregnant mother, Breastfeeding

Corresponding Author:

Farida Linda Sari Siregar, M.Kep
Email: farida.linda78@gmail.com
Tel: +62 813 6146 5260

INTRODUCTION

Exclusive breastfeeding, which involves feeding an infant with only breast milk without any additional food or drink, including water for six months, has been a problem in Indonesia. This improves the nutritional status to achieve adequate quality human resources. However, a non-exclusive breastfed infant is at a six-times risk of dying in the first year (1). When not given, exclusive breastfeeding has many risks to the infant and mother. For infants, there is an increased incidence of infectious morbidity, elevated risks of childhood obesity, type 1 and type 2 diabetes, leukemia, and sudden infant death syndrome. Meanwhile, for mothers, there is an increased incidence of premenopausal breast cancer, ovarian cancer, retained gestational weight gain, type 2 diabetes, myocardial infarction, and metabolic syndrome (2).

The community's response to the exclusive breastfeeding program has not been positive. There are six factors to the

initiation and continuation, including nonsmoking, mode of delivery parity dyad connections, maternal education, and breastfeeding education (3). The determinants of the success in the first two months include education level, employment status, early initiation, husband's support, knowledge, and techniques (4). According to the study by (5), maternal factors affecting the practice of early initiation include mothers' knowledge, attitude, and exclusive breastfeeding, which is related to mothers' education level, knowledge, and attitude.

Generally, the role of the midwife significantly influences the practice of early initiation and exclusive breastfeeding, which is related to Family support (6). Studies on the knowledge and attitude of pregnant women revealed that prior exposure, a positive attitude, and a strong prenatal intention were significant predictors of postpartum practices (7,8).

The study by (9) showed that knowledge is the most dominant factor related to the perception of insufficient breast milk, while self-awareness affects breastfeeding success (10). Although campaigns, support groups, and counselor training are not carried out, the socialization and advocacy of exclusive breastfeeding are done, though not optimal because it is not prioritized (11).

The National data reported that the prevalence of exclusive breastfeeding is low, around 38%, though the government is targeting coverage of 80%. Also, the coverage in North Sumatra Province is low and has decreased from the previous year (12). Based on data from the Health Profile of North Sumatra Province in 2012, the percentage of exclusively breastfed babies from 2004-2012 decreased significantly, where 2012 had the lowest achievement of 20.33% (13). Therefore, this study aimed to evaluate the effect of the seven-contact program on mothers' knowledge, motivation, and ability to breastfeed at 8 weeks postpartum.

MATERIALS AND METHODS

This study was a quasi-experimental design, where the participants were observed before and after the intervention. It was conducted at the Sari Maternity Clinic in Medan City from July to December 2020. Furthermore, the purposive sampling technique was used to select 37 samples and the inclusion criteria include 28 weeks gestation age, checked pregnancy at the Sari Maternity Clinic in Medan City, and agreed to implement seven-contact breastfeeding and assessed her knowledge, motivation, and ability to breastfeed during the first 8 weeks postpartum. Meanwhile, the exclusion criteria include mothers who intended to formula feed and not routinely do a pregnancy check.

The organization's research and ethics board approved this study. After the eligible participants were selected, a questionnaire of the demographic data, knowledge, motivation, and observation sheet of breastfeeding ability before the intervention of seven breastfeeding contacts (pre-test) was given. The seven-contact breastfeeding was implemented by previously trained researchers and the intervention was conducted during the first 8 weeks after delivery. The participants who finished the seven-contact breastfeeding were given a questionnaire on the knowledge, motivation, and observation sheet of breastfeeding ability (post-test).

The seven-contact breastfeeding intervention: the first contact was at 28 weeks of gestation, where mothers were taught breast anatomy by watching videos, the milk production process in the body, early breastfeeding initiation, breastfeeding position, and attachment of the baby's mouth when feeding. Furthermore, the second contact was at 36 weeks of gestation where mothers were taught early breastfeeding initiation by watching videos and milk production in the first 3 days after delivery. The third contact was immediately after delivery, early initiation was conducted and the baby was placed on the mother's bare chest to find the nipple for herself for 1 hour. Subsequently, the fourth contact was on the 2nd day after delivery, where the mothers were helped to place the baby in the right position, to ensure optimal attachment between the baby's mouth and the mother's nipple. The fifth contact is 7 days after delivery, which

involves observing how to breastfeed and the success of breastfeeding for one week. Furthermore, the sixth contact is 40 days after delivery, where the mothers were assisted in placing the baby in the right position, to ensure optimal attachment between the baby's mouth and the mother's nipple. The seven-contact occurs when the baby is 8 weeks old, mothers were taught how to pump, store, and save expressed breast milk, as well as procedures for expressing breast milk to babies while working in the office.

The breastfeeding knowledge questionnaire contains 20 questions using correct (1) and wrong (0) answer choices, with a Cronbach's alpha coefficient of 0.78. Furthermore, the Breastfeeding Motivational Instructional Measurement Scale (BMIMS) questionnaire was used for mothers motivation, it consists of 17 questions with the answer choices strongly agree (3), agree (2), neutral (1), and disagree (0). The BMIMS measures three essential motivational components associated with the duration to breastfeed, including total value placed on breastfeeding, total perceived midwife support, and total expectancy for success with a reliability coefficient of 0.86, 0.85, and 0.87, respectively (14). In addition, the WHO breastfeeding observation sheet was used in a modified counseling training book, consisting of 15 actions with yes (1) and no (0) answer choices (15). The variable questionnaire is counted and evaluated based on the score before and after the intervention.

Data analysis was performed using the SPSS 21.0 software package (SPSS Inc., Chicago, USA). The data was expressed in frequencies, percentages, or mean (standard deviation, SD) and analyzed using the paired Student's t-test. The results showed a statistical significance with a p-value < .05. In addition, this study obtained ethical approval from the Research Ethics Commission of the Faculty of Nursing, University of North Sumatra No.2283/IV/SP/2020.

RESULTS

The results revealed that the characteristics of third trimester pregnant women were mostly <25 years old, high school education, housewife job, gravida 1, and received information about breastfeeding from a health provider, accounting for 32.4%, 70.3%, 89.2%, 29.7%, and 51.7%, respectively (Table I).

Based on the results of this study, the mothers' mean knowledge before and after the intervention were 20.38 and 28.43, with a standard deviation of 4.940 and 2.292, respectively. This indicates that there is a significant relationship between the intervention and knowledge. According to the paired t-test, the significance value of the 2-tailed test was 0.001 with a p-value <0.05 (Table II).

The results showed that mothers' mean motivation to

Table I: Respondent characteristics (n=37)

Variable	f	%
Age		
- < 25 years	12	32.4
- 26-30 years	10	27.0
- 30-35 years	9	24.3
- > 35 years	6	16.2
Educational		
- Primary school	1	2.7
- Junior high school	5	13.5
- Senior high school	26	70.3
- Diploma	3	8.1
- Bachelor	2	5.4
Occupation		
- Housewife	33	89.2
- Private company	2	5.4
- Employees	1	2.7
- Civil officer	1	2.7
Gravida		
- 1	11	29.7
- 2	9	24.3
- 3	4	10.8
- 4	9	24.3
- 5	4	10.8
Information resources		
- Never	6	16.2
- Internet	3	8.1
- Health provider	23	62.2
- Book	5	13.5

breastfeed before and after the intervention were 39.84 and 61.16, with a standard deviation of 1.979 and 2.102, respectively. This indicates that mothers were highly motivated after the intervention (mean=-21.324; SD= 3.092), hence there is a significant relationship between the intervention and motivation. Based on the paired t-test, the value of significance (2-tailed) was 0.001 with a p-value of <0.05 (Table III).

The results of this study showed that the mean ability of mothers to breastfeed before and the intervention were 39.84 and 61.16, with a standard deviation of 1.979 and 2.102, respectively. . This indicates that mothers' ability increased after the intervention (mean=-6.297; SD=1.884). Furthermore, the Paired t-test showed that the significance value (2-tailed) was 0.001 with a p-value <0.05 (Table IV).

DISCUSSION

The factors that affect mothers in exclusive breastfeeding are the knowledge, values or norms, social, work support, child care, and health services (16). Furthermore, the knowledge of breastfeeding before and after treatment during the first month of postpartum can be increased by providing counseling and extension to the 25 pregnant women in their last trimester. There is a significant

Table II: The effect of the implementation of breastfeeding contact on the knowledge of pregnant women (n=37)

Variable	Mean	Std. Deviation	Pair Differences		t	df	Sig. (2-tailed)	
			Std. Error Mean	95% Confidence Interval of the Difference				
				Lower				Upper
Knowledge pre	20.38	4.940	.812	-4.424	-3.076	-11.138	36	.001
Knowledge post	28.43	2.292	.377					

Table III: The effect of the implementation of breastfeeding contact on the motivation of pregnant women (n=37)

Variable	Mean	Std. Deviation	Pair Differences		t	df	Sig. (2-tailed)	
			Std. Error Mean	95% Confidence Interval of the Difference				
				Lower				Upper
Motivation pre	39.84	1.979	.325	-22.355	-20.294	-41.955	36	.001
Motivation post	61.16	2.102	.346					

Table VI: The effect of breastfeeding contact implementation on the ability of pregnant women (n=37)

Variable	Mean	Std. Deviation	Pair Differences		t	df	Sig. (2-tailed)	
			Std. Error Mean	95% Confidence Interval of the Difference				
				Lower				Upper
Ability pre	39.84	1.979	.325	-6.925	-5.669	-20.336	36	.001
Ability post	61.16	2.102	.346					

difference between the means of knowledge before and after treatment, due to the method given at the time of counseling (17). For mothers with babies aged 3-4 months who are still breastfed, the study by (18) reported significant differences in the knowledge of mothers who obtained assistance compared to those without assistance. Also, for mothers who had babies aged 6-12 months, another study by (19) in South Sulawesi reported a relationship between exclusive breastfeeding and mothers' level of knowledge.

According to the observation, the breastfeeding practices on 25 pregnant women in their final trimester are better than having them receive counseling (17). The results of the study on 44 mothers with spontaneous labor showed that 47.7% reported that postpartum breastfeeding is less true, and factors such as job, income, and education are not significantly related to proper technique. Regarding knowledge, proper technique is significantly associated with early initiation, health education, and parity, where health education is the most influential factor (20). Mothers with babies aged 3-4 months, who exclusively breastfed, reported that receiving assistance had an impact on the success (18).

The motivation is significantly associated with breastfeeding success. According to a study conducted in Hong Kong, mothers' intention increased by 32% for each family member who supported (21). The initiation of the lactation process for Turkish women is promoted by robust motivation, proactive lactation management including constant assistance and care, and social support (22). Women who powerfully proposed exclusive procedure were trained at a higher level (23). Therefore, when planning nursing interventions, culture-specific motivations interfering with mothers' behaviors should be considered (24).

Breastfeeding is an ability that can be challenging, hence, primipara mothers need much help and support to effectively achieve this procedure. The difficulties of the first experience interfere with endurance (25). A minimum of seven-contact with a health care provider is exclusively required for successful procedure for six months. About 77.1% of breastfeeding mothers who performed the seven-contact procedure were successful, while 67.7% of mothers were unsuccessful. Hence, there is a significant relationship between the seven-contacts intervention and breastfeeding success (26). The seven-contact and lactation education is a method that effectively increases the knowledge and success of the exclusive procedure 40 days postpartum. These knowledge and success are not influenced by the quantity but the quality of education. In addition, the quality of the counselors affects the knowledge and confidence of mothers (27).

CONCLUSION

The seven-contact breastfeeding increase the level of knowledge, motivation, and the mother's ability. Therefore, it is recommended to pregnant women in their third trimester to increase and support the success of exclusive breastfeeding after delivery.

REFERENCES

1. Peraturan Pemerintah Republik Indonesia No. 33. Pemberian Air Susu Ibu Eksklusif. Peratur Pemerintah Republik Indones. 2012
2. Stuebe A. The risks of not breastfeeding for mothers and infants. *Rev Obstet Gynecol.* 2009;2(4):222–31. doi: 10.3909/riog0093
3. Cohen SS, Alexander DD, Krebs NF, Young BE, Cabana MD, Erdmann P, et al. Factors Associated with Breastfeeding Initiation and Continuation: A Meta-Analysis. *J Pediatr [Internet].* 2018;203:190-196.e21. doi:10.1016/j.jpeds.2018.08.008
4. Amin W, Wayan Agung Indrawan I, Sriwahyuni E. Influence of Mother's Social Factors and Breastfeeding Success in the First Two Months. *J Kedokt Brawijaya.* 2014;28(2):146–51. doi: 10.21776/ub.jkb.2014.028.02.16
5. Raharjo BB. Mother Profile and Role of Midwife in Initiation Breasfeeding Early and Practice Exclusive Breasfeeding. *KESMAS - J Kesehat Masy.* 2014;10(1):53–63. doi: 10.15294/kemas.v10i1.3070
6. Oktalina O, Muniroh L, Adiningsih S. The relationship between husband and family support with exclusive breastfeeding in breastfed mothers of KP-ASI. *Media Gizi Indones.* 2015;10(1):64–70. doi: 10.20473/mgi.v10i1.64-70
7. Naja F, Chatila A, Ayoub JJ, Abbas N, Mahmoud A, Abdulmalik MA, et al. Prenatal breastfeeding knowledge, attitude and intention, and their associations with feeding practices during the first six months of life: a cohort study in Lebanon and Qatar. *Int Breastfeed J [Internet].* 2022;17(1):15. doi:10.1186/s13006-022-00456-x
8. Khasawneh W, Kheirallah K, Mazin M, Abdunabi S. Knowledge, attitude, motivation and planning of breastfeeding: A cross-sectional study among Jordanian women. *Int Breastfeed J.* 2020;15(1):1–9. doi: 10.21203/rs.3.rs-17690/v1
9. Prabasiwi A, Fikawati S, Syafiq A. Exclusif Breasfeeding and Perception of Insufficient Milk Suplya. *Kesmas Natl Public Heal J [Internet].* 2015;9(3):282. doi: 10.21109/kesmas.v9i3.691.g458
10. Wattimena I, Werdani YDW. Manajemen Laktasi dan Kesejahteraan Ibu Menyusui. *J Psikol.*

- 2015;42(3):231. doi: 10.22146/JPSI.9911
11. Amalia A, Shaluhiah Z, Duren P, Kesehatan D, Semarang K, Promosi M, et al. Langkah Peningkatan Pemberian ASI Eksklusif di Kabupaten Semarang. *J Promosi Kesehat Indones*. 2018;8(2):90–9. doi: 10.14710/JPKI.8.2.90
 12. Badan Penelitian dan Pengembangan Kesehatan Kementerian Kesehatan RI. *Riset Kesehatan Dasar*. 2013.
 13. Dinas Kesehatan Provinsi Sumatera Utara. *Profil Kesehatan Provinsi Sumatera Utara*. 2012.
 14. Stockdale J, Sinclair M, Kernohan WG, Keller JM, Dunwoody ML, Cunningham JB, et al. Feasibility study to test designer breastfeedingTM: A randomised controlled trial. *Evid Based Midwifery*. 2008;6(3):76–82.
 15. WHO. *Breastfeeding counseling training*. Jakarta; 2011.
 16. Mufdilah. *Kebijakan Pemberian ASI Eksklusif: Kendala dan Komunikasi*. Yogyakarta: Nuha Medika; 2017.
 17. Indria DM, Probandari AN, Tamtomo D. Perbedaan Pengaruh Konseling Dan Penyuluhan Permasalahan Menyusui Terhadap Pengetahuan, Motivasi, Dan Kemampuan Menyusui Selama Satu Bulan Pertama Pasca Persalinan. *J Kesehat Islam Islam Heal J*. 2020;7(2):63. doi: 10.33474/JKI.V7I2.8893
 18. Taufiqurrahman, Masthalina H, Suhaema, Handayani S. Pengaruh Pendampingan pada Ibu Menyusui terhadap Pengetahuan, Sikap dan Tindakan dalam Pemberian ASI Eksklusif dan Status Gizi Balita. *J Penelit Gizikes*. 2015;1(1):44–53. Available from: <http://journal.poltekkesdepkes-sby.ac.id/index.php/GZ/article/view/357/291>
 19. Thaha ILM, Razak R, Ansariadi. Determinants of Exclusive Breastfeeding among Multiparous in Jeneponto. *J MKMI*. 2015;247–52. doi: 10.30597/mkmi.v11i4.534
 20. Sulistianingsih A, Sari YS. Faktor Risiko Yang Berpengaruh Terhadap Teknik Menyusui Pada Ibu Nifas. *Gaster*. 2018;16(2):117. doi: 10.30787/GASTER.V16I2.300
 21. Lok KYW, Bai DL, Tarrant M. Family members' infant feeding preferences, maternal breastfeeding exposures and exclusive breastfeeding intentions. *Midwifery [Internet]*. 2017;53:49–54. doi:10.1016/j.midw.2017.07.003
 22. Karaçam Z, Sağlık M. Breastfeeding problems and interventions performed on problems: Systematic review based on studies made in Turkey. *Turk Pediatr Ars*. 2018;53(3):134–48. doi: 10.5152/TurkPediatriArs.2018.6350
 23. Manhire KM, Williams SM, Tipene-Leach D, Baddock SA, Abel S, Tangiora A, et al. Predictors of breastfeeding duration in a predominantly Māori population in New Zealand. *BMC Pediatr*. 2018;18(1):1–10. doi:10.1186/s12887-018-1274-9
 24. Tuthill EL, Butler LM, Pellowski JA, McGrath JM, Cusson RM, Gable RK, et al. Exclusive breastfeeding promotion among HIV-infected women in South Africa: An Information-Motivation-Behavioural Skills model-based pilot intervention. *Public Health Nutr*. 2017;20(8):1481–90. doi: 10.1017/S1368980016003657
 25. Cangul E, Sahin NH. The Effect of a Breastfeeding Motivation Program Maintained during Pregnancy on Supporting Breastfeeding: A Randomized Controlled Trial. *Breastfeed Med*. 2017;12(4):218–26. doi: 10.1089/bfm.2016.0190
 26. Febriani A, Kamsiah, Marleni WA. Pelaksanaan 7 Kontak Asi Pada Keberhasilan Menyusui. *J Media Kesehat*. 2018;11(1):007–11. doi:10.33088/jmk.v11i1.350
 27. Hapitria P, Nurlina N. Pengaruh 7 Kontak Air Susu Ibu (Asi) Terhadap Pengetahuan Dan Keberhasilan Menyusui 40 Hari Ibu Post Partum Di Upt Puskesmas Wilayah Kota Cirebon Tahun 2019. *Din Kesehat J Kebidanan Dan Keperawatan*. 2020;11(1):233–42. doi: 10.33859/dksm.v11i1.618