

Original Research Paper

The correlation between the implementation of EBI and smooth breast milk production in breastfeeding mothers

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Submitted: July 15, 2024

Revised: August 18, 2024

Accepted: November 23, 2024

Abstract

Some mothers experience breastfeeding problems, the most common problem experienced by mothers after giving birth is that breast milk does not flow smoothly or does not come out. The impact of unsmooth milk production for mothers is swollen breasts, mastitis, blocked milk ducts, and lack of confidence in breastfeeding babies. In addition, the impact on babies is that babies do not like to breastfeed and the increase in the provision of breast milk substitutes, so that it affects the nutritional needs of babies. The purpose of this study is to determine the correlation between the implementation of early breastfeeding initiation and the smooth discharge of breast milk at the Gamping 1 Health Center. Methods This research is an analytical descriptive research with a cross-sectional approach. The sample in this study is 30 people with a total sampling technique. This research has passed the Ethical Clearance test with number 3302/KEP-UNISA/XII/2023. The instrument of this research is a questionnaire that contains several questions and written statements to the respondents. The results of the research from 30 respondents according to the variables through the chi-square test found that there was a meaningful correlation between the implementation of early breastfeeding initiation and the smooth discharge of breast milk in breastfeeding mothers in the Gamping 1 Health Center Working Area of 0.014 ($p < 0.05$). The data and results obtained can be used as a reference and input for health workers, especially midwives as the main helpers of maternity mothers to optimize health services in initiating early breastfeeding.

Keywords: breast milk; breastfeed; expenses

1. Introduction

The infant mortality rate (IMR) is the most important indicator for a country as a reference to determine the level of public health, in 2019 in Indonesia the infant mortality rate reached 24 per 1,000 live births (Kementerian Kesehatan, 2020). Indonesia is in first place with the highest infant mortality rate in Southeast Asia, as for the main causes of infant death, one of which is malnutrition and infection because most babies do not get breast milk after birth, while breast milk has very important benefits for the immune resilience of the baby's body (Jayani, 2018). However, some mothers still experience breastfeeding problems, usually the most common problem experienced by mothers after giving birth is not smooth or not coming out (Juanita, 2016).

Based on national data in 2020, it was found that 67% of all breastfeeding mothers experienced impaired breast milk production or unsmooth breast milk. This generally occurs due to two factors, namely the mother factor and the baby factor. Maternal factors, including physical factors (nutrition and fluid intake, nipple shape and condition, age, and parity) and psychological factors (anxiety and motivation or support), while baby factors, including low birth weight (BBLR), infant health status, anatomical abnormalities, and infant aspiration (Rahmawati & Saidah, 2021).

The impact of unsmooth milk production for mothers includes swollen breasts, mastitis, blocked milk ducts, and mothers lack confidence in breastfeeding their babies (Sulistiyawati, 2015). In addition, the impact on babies is that babies do not like to breastfeed and the increase in the provision of breast

milk substitutes, thus affecting the nutritional needs of babies (Hety & Susanti, 2021). The problem of smooth breast milk production in mothers is also caused by insufficient stimulation of the hormones prolactin and oxytocin, so that milk production is reduced and the baby does not get adequate breast milk (Alyensi, 2017). These problems can affect breast milk production, so that the success of exclusive breastfeeding becomes an obstacle (Rahmawati & Saidah, 2021). According to Mesra, et al (2013) early breastfeeding initiation is very important in determining the success of the breastfeeding process and can reduce the newborn mortality rate by around 22%, as well as reduce the infant mortality rate by 8.8% because mothers who initiate early breastfeeding will get stimulation on the mother's nipples by baby sucking. The faster there is a suction stimulation in the mother's nipple, the faster the milk production process will be, because in the implementation of EBI there is a shock of the baby's head to the mother's breast, the baby's hand touch to the nipples and its surroundings, the baby's squeaking and licking on the mother's nipples stimulates the release of the hormone oxytocin (Yanti & Khoiriani, 2021).

The government also gives a lot of support to the implementation of early breastfeeding initiation by making regulations that prohibit artificial milk manufacturers from including promotional sentences for their products that give the impression that artificial milk is better than breast milk (Fitriyah et al, 2022). In addition, support from the government regarding EBI is also listed in Government Regulation of the Republic of Indonesia No. 33 of 2012 concerning exclusive breastfeeding which discusses the EBI program and also community support in enforcing the program (Santi, 2017).

Based on research conducted by Sari, P. Arini, with the title "The Corellation between Early Breastfeeding Initiation and Frequency of Breastfeeding with Breast Milk Production in Breastfeeding Mothers Infants 0-6 Months at the Rantepao Health Center, North Toraja Regency in 2019", the results of 26 respondents who initiated early breastfeeding were 21 people (55.3%) who had smooth milk production, and 5 (13.2%) who had non-smooth milk production, While 12 Orang who did not initiate early breastfeeding, there were 2 people (5.3%) who had unsmooth milk production. This study is to determine the corellation between the implementation of early breastfeeding initiation and the smooth discharge of breast milk at the Gamping 1 Health Center.

2. Research Methods

This type of research is quantitative using an analytical descriptive research design with a cross-sectional data collection approach. The purpose of this study is to determine the corellation between the implementation of early breastfeeding initiation and the smooth production of breast milk in breastfeeding mothers. The sampling technique uses total sampling and gets a sample of 30 respondents. The inclusion criteria in this study are breastfeeding mothers who have a baby <6 months, mothers who give birth to babies normally, mothers who have good mental and physical health, mothers who are willing to be respondents by filling out informed consent, mothers who do EBI before. In this study, the researcher used a questionnaire research instrument adopted from Rahmida Sianturi in 2019. The exclusion criteria in this study are mothers who are sick, mothers who have contraindicated in breastfeeding, mothers who give birth to premature babies. The measuring tool used is a questionnaire. The statistical analysis test uses the chi square test because it has a type of data on each variable, namely nominal. This research has received permission from research at Aisyiyah University Yogyakarta with NO.3302/KEP-UNISA/XII/2023. Data analysis using univariate and bivariate analysis.

3. Results and Discussion

3.1. Result

Based on the research that has been conducted, data on the characteristics of respondents include age, education, and occupation. The following are tables that present data on the frequency distribution of respondents that have been implemented, including:

Table 1. Age Distribution

Mother's Age	Lifespan Distribution	
	Sum	Percentage
20-25 years old	7	23.3
26-28 years old	11	36.7
30-35 years old	12	40
Total	30	100

Source: Primary Data, 2024

The distribution of maternal age can be seen in table 1. Based on the table, most of the mothers who became respondents were 30-35 years old, namely 12 people (40.0%). The smallest percentage is 20-25 years old, which is 7 people (23.3%).

Table 2. Distribution of Mother's Education Levels

Maternal Education	Lifespan Distribution	
	Sum	Percentage
Elementary School	1	3.3
Junior High	10	33.3
High School	15	50
S1	3	10
S1	1	3.3
S2	1	3.3
Total	30	100

Source: Primary Data, 2024

The distribution of maternal education can be seen in table 2. Based on the table, most of the mothers who were respondents had a high school education, which was as many as 15 people (50.0%). The smallest percentage has elementary and S2 education, which is 1 person (3.3%).

Table 3. Distribution of Mother's Employment Levels

Mother's Work	Lifespan Distribution	
	Sum	Percentage
Housewife	22	73.3
Self employed	1	3.3
Private employees	5	16.7
Civil servants	1	3.3
Teacher	1	3.3
Total	30	100

Source: Primary Data, 2024

The distribution of maternal labor can be seen in table 3. Based on the table, most of the mothers who are respondents have jobs as housewives (IRT), which is as many as 22 people (73.3%). The

smallest percentage of people have jobs as entrepreneurs, civil servants, and teachers, which is 1 person (3.3%).

Table 4. Cross-tabulation of the Corellation between Early Breastfeeding Initiation and Smooth Breast Milk Production in Breastfeeding Mothers in the Working Area of the Gamping I Health Center

EBI	Smooth breastfeeding		P Value
	Not smooth	Smooth	
Not done	5	4	0.014
Done	2	19	
Total	7	23	

Source: Primary Data, 2024

Based on table 4, the group of respondents who did not initiate early breastfeeding (EBI) and had smooth breastfeeding was 5 people (16.6%) while the group of respondents who initiated early breastfeeding and had smooth breastfeeding was 2 people (6.6%) and respondents who did not initiate early breastfeeding and had smooth breastfeeding were 4 people (13.3%) and respondents who did EBI and had smooth breastfeeding were 19 people (63.3%). From the results of the analysis above, it can be seen that more groups of respondents by doing EBI have smooth breastfeeding, namely 21 people. When questioned to the respondents, they admitted that their babies were less active or lazy to breastfeed, so the suction to stimulate the nipples was very lacking, besides that during breastfeeding, mothers did not pay attention to their nutritional intake because they were busy caring for and taking care of their babies, besides that there were several problems in economic factors so that the fulfillment of nutrition was only modest. After giving birth, the nutritional intake is fulfilled properly and at the time of choosing contraceptives, they ask health workers to use contraceptives that will not interfere with breast milk production, so it is very related to the factors that affect the smooth production of breast milk, namely nutritional intake and the use of contraceptives. From the results of the study, several mothers admitted that they only did EBI for 30-45 minutes, which for the implementation of EBI was 1 hour immediately after the baby was born and there were also some who filled in not doing EBI so that in accordance with the operational definition, respondents who did EBI < 1 hour were categorized as not doing EBI. The results of the bivariate analysis above showed that the Early Breastfeeding Initiation variable had a ρ -value of 0.014 ($\rho < 0.05$) which means that there was a corellation between Early Breastfeeding Initiation and Smooth Breast Milk Output. The results are supported by the value of Ratio Prevalence (95% Confident Interfal) = 7.462 (2.10 – 0.00) which means that respondents with early breastfeeding initiation do not have a 7.462 times greater risk compared to respondents who do not initiate early breastfeeding (EBI) who both do not have smooth breast milk production.

The results of this study are in line with research conducted by Meta Nurbaiti (2020) which states that EBI is the process of breastfeeding babies immediately after birth and the baby is left to look for the mother's own nipples (not thrust into the nipples), placing the baby on the mother's chest or abdomen so that the baby's skin is attached to the mother's skin. The first stage of EBI usually the baby will only be silent for 20-30 minutes for 1 hour of EBI and it turns out that this happens because the baby is neutralizing the situation after the trauma. Breast milk (breast milk) is the gold standard for baby food. Breast milk is proven to have advantages that cannot be replaced by any food and drink, because breast milk contains the most precise, complete, and always adjusted to the baby's needs at all times. The gold standard of baby food begins with the act of initiating early breastfeeding (EBI) followed by exclusive breastfeeding for 6 months (Setyowati, 2018). The psychological benefits of breastfeeding are to improve the emotional corellation between the mother and the baby and accelerate the process of bonding attachment. You will feel proud and feel able to treat with a sense of sadness everything your

baby needs. Direct physical contact during breastfeeding between the baby and the mother has a very large effect on preventing hypothermia (low body temperature) in the baby by the mother during the breastfeeding process (Yanti and Khiriyani, 2022). Colostrum, namely on the first and second days to protect and prevent infections and get breast milk, colostrum is rich in nutrients such as carbohydrates, proteins, antibodies, and contains very high carotene and vitamin A. In addition to containing various nutrients, colostrum also helps clean the baby's digestive tract to prepare the baby's digestive tract to receive breast milk immediately (Mira & Sonda, 2023). The low coverage of breastfeeding is related to breast milk production. Many factors affect breast milk production, including the frequency of breastfeeding, the weight of the baby at birth, the gestational age when the baby is born, maternal age and parity, stress and acute diseases, not doing early breastfeeding initiation (EBI) can affect the smooth flow of breast milk, the presence of smokers, formula feeding, alcohol consumption, breast care, the use of contraceptives and nutritional status (Leiwakabessy and Azriani, 2020). There is a correlation between the provision of early breastfeeding initiation (EBI) and the smooth production of breast milk with the results of the study using a statistical test with chi-square obtained a p value of $0.006 < \alpha (0.05)$, OR (Odd Ratio) of 6,909 which means that respondents who initiated early breastfeeding (EBI) had a chance of 6,909 times in smooth breast milk production compared to respondents who did not initiate early breastfeeding. There are several mothers who do not do EBI but have smooth breastfeeding, it turns out that after the researcher discussed with the respondents, it was found that during breastfeeding, mothers received a lot of support and assistance from their families and husbands so that their nutritional intake was well met, in addition, before giving birth, mothers had consulted with midwives for the selection of postpartum contraceptives that did not have side effects during breastfeeding so that after giving birth, mothers already know that they will use contraceptives that are safe and do not interfere with their milk production. The opposite was also found by researchers where mothers who have done EBI for 1 hour still experience unsmooth breastfeeding, it turns out that after discussing with researchers it was found that after giving birth mothers did not pay attention to nutritional intake because they were busy taking care of their children and husbands, besides that there were also those who said that after using contraceptives, their breast milk which was initially smooth became a little unsmooth, besides that mothers complained that their babies were less active in breastfeeding, so sometimes mothers You have to force the baby a little to want to suck on the mother's breast. The same study was conducted by Setyowati (2018) who stated that there was a meaningful correlation between Early Breastfeeding Initiation and Smooth Breastfeeding Production During the First 6 Months, with the results of statistical test analysis obtaining a significant value of 0.724 with a significant test ($p = 0.358$ with an error rate of $(\alpha) 5\% = (0.05)$ (Setyowati, 2018).

4. Conclusion

Based on the results of research that has been conducted on breastfeeding mothers in the Gamping 1 Health Center Working Area with a total of 30 respondents, 21 mothers have initiated early breastfeeding with a percentage of 70% and are already classified as good, while the remaining 9 people with a percentage of 30% do not initiate early breastfeeding. Of the 30 respondents, there were 23 mothers (76.7%) who had smooth breastfeeding, which was caused by mothers who had done EBI. In addition, there are also 7 mothers (23.3%) who have unsmooth breastfeeding, where the most common cause is not doing EBI and there are several factors that affect the smooth delivery of breast milk such as baby sucking, lack of nutritional intake and the choice of contraceptives. From 30 breastfeeding mothers, it was found that the correlation between the implementation of early breastfeeding initiation and the smooth production of breast milk in breastfeeding mothers had a p -value of 0.014 ($p < 0.05$) which means that there is a meaningful correlation between the implementation of early breastfeeding initiation and the smooth production of breast milk. The results are supported by the value of Ratio

Prevalence (95% Confident Interfal) = 7.462 (2.10 – 0.00) which means that respondents with early breastfeeding initiation do not have a 7.462 times greater risk compared to respondents who do not initiate early breastfeeding (EBI) who both do not have smooth breast milk production. The data and results obtained can be used as a reference and input for health workers, especially midwives as the main helpers of maternity mothers to optimize health services in initiating early breastfeeding.

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