The Influence of Assistance and the Success of Early Breastfeeding Initiation on Maternity Mothers

Sukaisi¹, Safrina*¹

¹ Department of Midwifery, Poltekkes Kemenkes Medan, Medan, Indonesia.

Received: November 22, 2023  
Revised: February 17, 2024  
Accepted: March 25, 2024  
Published: March 31, 2024

Corresponding Author:  
Safrina  
daulaysafrina@gmail.com

Abstract: Colostrum, which is yellowish breast milk, is considered vital because it is the first immunization for newborns and plays a significant role in the newborn's immune defence system. This research aimed to determine the effect of assistance in early breastfeeding initiation and the success of early breastfeeding initiation among mothers giving birth at the Independent Midwife Practice in Pematangsiantar City. The method used in this research was a quasi-experiment with a two-group design pretest-posttest with the control group, which was carried out on 67 mothers divided into two groups, using consecutive sampling (n=34 and unaccompanied mothers n=33). Assistance in the form of providing information on Early Breastfeeding Initiation (EBI) using materials, leaflets, and AVA/videos. The Early Breastfeeding Initiation Satisfaction Questionnaire was adopted from the Maternal Breastfeeding Evaluation Scale. The non-parametric Wilcoxon test was used for testing. Testing used the SPSS. The results of this study showed a significant relationship between mothers' knowledge and satisfaction with success before and after being given the intervention with (p=0.001) and (p=0.025). Assistance for mothers giving birth will increase the success of women in labour to breastfeed their babies as early as possible.

Keywords: Accompanying; Baby; Breast milk; Early initiation of breastfeeding; Success

Introduction

Breastfeeding is an effective intervention to prevent neonatal death and morbidity. It can even reduce the incidence of infection due to diarrhoea, neonatal sepsis and pneumonia by 55-87% (Arhammah & Fadilah, 2022; Wu et al., 2019; Hossain & Mhrshahi, 2022). Globally, optimal breastfeeding can prevent the death of more than 800,000 children under five each year (World Health Organization, 2019b). Breastfeeding of newborns has important implications for current and future health, especially in developing countries (Ayalew & Asmare, 2021; Marshall et al., 2022; North et al., 2022).

The World Health Organization (WHO/World Health Organization) and the United Nations Children's Fund (UNICEF) jointly recommend EBI, exclusive breastfeeding for the first six months, and continued breastfeeding for up to 2 years of age, along with appropriate complementary foods, as optimal breastfeeding practice (Dharel et al., 2020; Gebretsadik et al., 2020; Spaniol et al., 2020).

Globally, only two in five (42%) newborns start breastfeeding within the first hour of life. The practice of implementing EBI in several countries varies from 35% in the Middle East and North Africa to around 35%, and for countries in East and South Africa, around 65% (Perez-Escamilla, 2020; World Health Organization, 2019a). WHO targets that by 2030, 70% of babies will have received early initiation of breastfeeding (Hadsuyatmana et al., 2021; De Souza et al., 2021; Gebretsadik et al., 2020). Based on the 2018 Basic Health Research, the proportion of EBI at the national level is 58.2%. Even though this is above the WHO achievement, the proportion of EBI in North Sumatra province is the third lowest after West Papua and Maluku, namely 39.9% (Kemenkes, 2019).

Various literatures show the relationship between EBI and infant mortality and morbidity. Research result of Khan et al. (2015) getting started...
breastfeeding after the first hour after birth is at multiple risk of neonatal death. Studies conducted (Smith et al., 2017) showed that Babies who start breastfeeding 2-23 hours after birth have a 33% greater risk of neonatal death than babies who start breastfeeding 1 hour, babies who start breastfeeding more than 24 hours have an 85% risk of neonatal death compared to babies who breastfeed less than 24 hours.

In studies conducted Gebretsadik et al. (2020) In 390 women in Ethiopia, more than one-third of babies did not initiate breastfeeding within the first hour after birth, and three-quarters of mothers wasted colostrum. Studies of Nandini et al. (2018) in Indonesia show primiparous mothers, especially adolescent primiparous mothers, are likelier to practice suboptimal breastfeeding than multiparous mothers. It was found that 7% of the participants wasted colostrum, and most participants (56%) did not have sufficient information about optimal breastfeeding. Optimal breastfeeding can save mothers from the cost of buying formula milk.

The Indonesian government has established various programs to support EBI's success, which are contained in government regulations (Kemenkes, 2019). In addition, WHO has recommended that health workers carry out breastfeeding counselling during prenatal, postnatal, and for 24 months or more. Counselling is done at least six times, through face-to-face, telephone or other media. So far, no regional regulation in Pematangsiantar City related to early breastfeeding initiation.

The reason the researchers conducted the research was that early initiation of breastfeeding was a 'life-saving' measure because early initiation of breastfeeding could save 22 percent of babies who died before the age of one month. Breastfeeding in the first hour of life, which begins with skin-to-skin contact between mother and baby, is stated as a global indicator. This is something new for Indonesia and is a government program, so it is hoped that all health workers at all levels of health services, both private and public, can socialize and implement it to support the success of this program.

An initial survey of several postpartum mothers at the midwife's independent practice stated that their babies were placed on their stomachs for only about ten minutes. During observation, some midwives who assisted in the delivery also placed the baby on the mother's stomach for only about ten to fifteen minutes. Interviews with the person in charge of the nutrition program holder at the Pematangsiantar City Health Office stated that the achievement of EBI was 90%, even though the reality differed from the results of the narratives of postpartum patients. It is important to strengthen colostrum feeding services for birthing mothers.

Method

The method used in this research is a quasi-experimental design two-group design pretest-posttest with a control group conducted on 67 mothers (EBI assisting intervention (n=34 and unaccompanied mothers n=33) at PMB Pematang Siantar City. The sampling technique used consecutive sampling. Data was collected using a questionnaire about EBI (Pretest/ Posttest) and a success questionnaire. The question questionnaire contains 20 questions that explore IMD knowledge. Ethical clearance number: 01.0195/KEPK/POLTEKKES KEMENKES MEDAN/2022. Assistance is carried out for pregnant women who will be followed until they give birth. Assistance in providing information about EBI using materials, leaflets, and AVA/IMD videos. The EBI satisfaction questionnaire was adopted from the maternal Breastfeeding Evaluation Scale (BES) (Leff et al., 1994) measurement using a Likert scale. EBI success with observation: successful if ≥1 hour, unsuccessful if <1 hour, adopted from IDAI (2013). Testing the homogeneity and normality of the data with the Chi-Square and Shapiro-Wilk tests as a condition in the parametric test. Obtained data is not normally distributed using non-parametric test Wilcoxon.

![Figure 1. Research flow assistance for pregnant women](image)

Result and Discussion

Results

Distribution of Respondent Characteristics in PMB Pematang Siantar City

Information about the respondents' characteristics, including age, gravida, education, occupation, and EBI
information sources. The distribution of respondents is as shown in Table 1.

Table 1. Description of the Results of the Respondent Characteristic Test at PMB Pematang Siantar City

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group intervention (n=34)</th>
<th>Group control (n=33)</th>
<th>p-values</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(mean±SD)</td>
<td>(mean±SD)</td>
<td></td>
</tr>
<tr>
<td>Age (years)</td>
<td>30.85 ± 6.21</td>
<td>29.42 ± 3.95</td>
<td>0.267</td>
</tr>
<tr>
<td>Gravida</td>
<td>2.47 ± 1.10</td>
<td>2.67 ± 1.16</td>
<td>0.456</td>
</tr>
<tr>
<td>Education:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Junior high school</td>
<td>3 (8.90%)</td>
<td>3 (9.10%)</td>
<td>0.275</td>
</tr>
<tr>
<td>- Senior high school</td>
<td>23 (67.60%)</td>
<td>27 (81.80%)</td>
<td></td>
</tr>
<tr>
<td>- Higher education</td>
<td>8 (23.50%)</td>
<td>3 (9.10%)</td>
<td></td>
</tr>
<tr>
<td>Job status:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- PNS</td>
<td>5 (14.70%)</td>
<td>1 (3.00%)</td>
<td>0.197</td>
</tr>
<tr>
<td>- Housewife</td>
<td>29 (85.30%)</td>
<td>32 (97.00%)</td>
<td></td>
</tr>
<tr>
<td>EBI resources:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Media</td>
<td>6 (17.60%)</td>
<td>7 (21.20%)</td>
<td>0.920</td>
</tr>
<tr>
<td>- Health workers</td>
<td>20 (58.80%)</td>
<td>18 (54.50%)</td>
<td></td>
</tr>
<tr>
<td>- There are not any</td>
<td>8 (23.50%)</td>
<td>8 (24.20%)</td>
<td></td>
</tr>
</tbody>
</table>

NB: EBI = Early Breastfeeding Initiation

Based on Table 1, it is known that in the control group, the dominant results obtained were age with an average value of 29.42 years; for the gravida variable, the average was obtained for 2.67; for the high school education variable, it was obtained for 81.80%, for work status as a housewife 97% and know the source of information about early breastfeeding initiation is from health workers by 54.50%. In the intervention treatment, dominant data was obtained; namely, the average age of the mother was 30.85 years; for gravida, the average was 2.47; for the education level at high school was 67.60%; for employment status as a housewife was 85.30%; and sources information about early initiation of breastfeeding was obtained from health workers by 58.8%.

The Results of the Knowledge of Respondents before and after Being Given an Intervention about Early Breastfeeding Initiation

In this study, the intervention group was given educational assistance about Early Breastfeeding Initiation (EBI) through materials, leaflets, and videos. In contrast, the control group was not assisted. This means that the mentoring carried out in this study increased the respondents' knowledge level compared to not being accompanied.

Table 2. Description of the Test Results for Differences in Knowledge and Satisfaction in the Intervention and Control Groups

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group intervention (n=34)</th>
<th>Group control (n=33)</th>
<th>P-values</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(mean±SD)</td>
<td>(mean±SD)</td>
<td></td>
</tr>
<tr>
<td>Knowledge score</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before</td>
<td>61.47 ± 9.25</td>
<td>59.00 ± 7.450</td>
<td>0.363</td>
</tr>
<tr>
<td>After</td>
<td>87.50 ± 5.40</td>
<td>58.48 ± 7.75</td>
<td>0.001</td>
</tr>
<tr>
<td>Satisfaction score</td>
<td>82.24 ± 15.91</td>
<td>75.76 ± 15.42</td>
<td>0.025</td>
</tr>
</tbody>
</table>

* Differences in the mean between groups (pretest & pretest control) were analyzed using the independent t-test statistical test at a significant level of 5%.

In Table 2 above, it can be seen for the knowledge score that the average before intervention was 61.47, with a standard deviation of 9.25. After the intervention, the mother's average ability increased to 87.50. In the control group, it was seen that the average was 59.00 with a standard deviation of 7.450 with a p-value = 0.363. After the second measurement in the control group, the average was 58.48. The independent t-test statistical test showed a mean difference between the intervention group and the control group, which means that the mother's ability had increased (p-value = 0.001). For the satisfaction score, the average before the intervention was 75.76, with a standard deviation 15.42. After the intervention, the average mother's ability increased to 82.24.
Discussion

Characteristics of Respondents in PMB Pematang Siantar City

This study found no differences in the characteristics of age, gravida, education, occupation, sources of information, and knowledge of Early Breastfeeding Initiation in the intervention group and the control group. Average in both groups at reproductive age. For the number of pregnancies (gravida), gravida is generally two. Both groups of respondents generally received information from health personnel. Unlike the program for implementing Early Breastfeeding Initiation does not include local government policies, especially in the City of Pematang Siantar, implementing Early Breastfeeding Initiation is a procedure in Normal Childbirth Care (Kemenkes, 2019).

The results showed that of the 67 mothers in labour, the mean age of the intervention group was 30.85, and that of the controls was 29.45. During a healthy reproductive period, it is known that the safe age for pregnancy, childbirth, and breastfeeding is 20-35 years, so what is suitable for the reproductive period is very good and very supportive of pregnancy. EBI implementation. This fits the view (Putri, 2020) that mothers aged between 20 to 35 years are referred to as adulthood or the reproductive period. So far, it is hoped that everyone will be able to deal with the problems they experience emotionally, especially in dealing with pregnancy, birth, childbirth, and baby care afterward. In antenatal women aged 35 years and over, where relatively reduced hormone production causes reduced lactation, adolescents aged 12-19 must also be studied carefully because they are not ready to develop physically, psychologically, and socially. It can disturb the psychological balance and affect milk production. People under the age of 20 are considered physically, mentally, and psychologically immature during pregnancy, childbirth, and breastfeeding. Meanwhile, the age above 35 years is also considered dangerous because the reproductive organs and the mother's physique are greatly reduced and decreased. In addition, congenital risks to the baby may also increase complications during pregnancy, labor, and delivery.

The education level of mothers who gave birth the most was high school, with 67 respondents, the control group, 81.8%, and the intervention group, 67%. According to the results obtained from this study, the level of education had a major effect on mothers. Knowledge, from IMI. This research agrees with the opinion (Notoatmodjo, 2005), which states that one factor that influences knowledge is the level of education, which indicates that the higher the level of education, the higher the level of knowledge that is maintained. Likewise, the higher a person's level of education, the more motivated person is to learn about breastfeeding and EBI. The low education of mothers causes a lack of knowledge of mothers in dealing with problems, especially during the implementation of EBI later. This knowledge is obtained both formally and informally. At the same time, mothers with a higher level of understanding are often more open to accepting changes or new things to maintain their health. Education will also motivate someone to have curiosity and seek experience so that the information received becomes an experience.

As for the type of mother's work, it showed that the majority of mothers who worked as housewives in the control group were 97%, and the intervention group was 85.3%. This shows that work can have a positive impact on the implementation of EBI, in line with research from Setyowati (2018) shows that most mothers immediately breastfeed their babies within 1 hour after birth (rapid breastfeeding initiation) and mothers do not immediately breastfeed their babies (slow breastfeeding initiation). Sources of information about Early Breastfeeding Initiation were obtained from health workers in the intervention group 58.8% and the control group 54.5%. According to Adam et al. (2016), Birth attendants are the main key to the success of EBI because, during this time, the role and support of birth attendants are still very dominant. If the birth attendant facilitates the mother to hug her baby immediately, the interaction between mother and baby is expected to occur soon. With the implementation of EBI, the mother is more confident in continuing to give her breast milk so that she does not feel the need to give food or drink to her baby, and the baby will feel comfortable latching on to the mother's breast and calm in the mother's arms immediately after birth. It is important to socialize health workers to implement EBI in pregnant women.

Knowledge and Satisfaction of Respondents about Early Breastfeeding Initiation

The results of the average knowledge of Early Breastfeeding Initiation in the intervention and control groups obtained a different average. That the intervention group was higher. Behaviour change theory starts with good knowledge (Indrawati et al., 2023). In this study, the intervention group was given educational assistance about EBI in the form of materials, leaflets, and videos, while the control group was not provided with assistance. This means that the mentoring carried out in this study increased the respondents' knowledge level compared to not being accompanied. Provision of sufficient knowledge can increase knowledge (Notoatmodjo, 2007).
The results showed that the average knowledge before the intervention was 61.47, with a standard deviation of 9.25. After the intervention, the mother's average ability increased to 87.50. In the control group, it was seen that the average was 59.00, with a standard deviation of 7.450. The average knowledge of mothers at the initial measurement stage was similar, namely 61.47 in the intervention group and 59.00 in the control group. The results of the independent t-test statistic showed that there was no mean difference between the treatment group and the control group, with a p-value = 0.363. After the second measurement in the control group, the average was 58.48. The independent t-test statistical test showed a mean difference between the intervention group and the control group, which means that the mother's ability had increased (p-value = 0.001). For the satisfaction score, the average before the intervention was 75.76, with a standard deviation 15.42. After the intervention, the average mother's ability increased to 82.24. The independent t-test statistical test results showed a mean difference between the intervention group and the control group (p-value = 0.025). According to Suhaemin et al. (2013), knowledge measurement results can be grouped into three categories, namely High (76% - 100%), Moderate (56% - 75%) and Less (<55%). Education is a process of planned behaviour change in individuals, groups, and communities to be more independent in achieving healthy living goals (Nasution et al., 2023; Indrawati et al., 2023; Lestari & Sari, 2022; Efendi et al., 2023). Education is a process of learning from not knowing about the value of health to knowing and from being unable to cope with one's health to being independent (Putra et al., 2021; Sardjan, 2022; Fernalia et al., 2019).

Studies from Nandini et al. (2018) show that primiparous mothers, especially adolescent primiparous mothers, are more likely to practice breastfeeding, which is not optimal compared to multiparous mothers. Mothers with primigravida revealed that 7% of participants wasted colostrum, and most participants (56%) did not have sufficient information about optimal breastfeeding; in implementing EBI, WHO has recommended that health workers carry out breastfeeding counselling during prenatal and postnatal, and for 24 months or more. Counselling is done at least six times, through face-to-face, telephone or other media (Desimbriana, 2021). This study confirms the results of the study (Asyima & Wulandari, 2019). A relationship exists between mothers' knowledge of the implementation of early breastfeeding initiation (EBI) in mothers giving birth with (p = 0.001) at the Jala Ammari Navy Hospital in 2019. In addition, research from Supriani et al. (2021) shows a change in mothers' average knowledge about early breastfeeding initiation with video media obtained from the results of the paired t-test P = 0.001 <0.05.

The results of this study on the level of maternal satisfaction, for the satisfaction score, the average before the intervention was 75.76 with a standard deviation of 15.42. After the intervention, the average mother's ability increased to 82.24. The independent t-test statistical test results showed a mean difference between the intervention group and the control group (p-value = 0.025). Implementation of EBI is a flow of normal delivery care (APN) that has been routinely carried out. EBI coverage in Indonesia is already high, namely 95.9% of the national target of 50%. The data is based on calculations from 493 districts/cities reporting EBI coverage compared to 519 districts/cities conducting EBI activities. Research result from Muhajir (2017) explains the high contribution of the husband's assistance to the mother's actions in initiating early breastfeeding. In this regard, the husband should accompany his wife during childbirth, pay attention and show affection so that the mother feels comfortable and happy during her delivery, which also positively impacts the mother's health and acceptance of her baby after giving birth. Research result from Sulistianingsih (2020) accompaniment and support from the family are the most influential factors in implementing EBI in mothers giving birth (p-value = 0.005). Research result from Assriyah et al. (2020) analysis of the relationship between family support and the implementation of early breastfeeding initiation found a significant relationship between family support and the implementation of early breastfeeding initiation. Interesting findings from this study are that EBI activities are carried out in clinical practice but are constrained by the long duration of EBI success. Almost all mothers stated that carrying out EBI for one hour was long. They complained of fatigue and soreness during EBI activities. Even though EBI activities are important related to the continuation of exclusive breastfeeding. Several studies mention the risks of delaying breastfeeding. Starting breastfeeding after the first hour after birth has multiple risks of neonatal death. Studies conducted by Smith 5 on babies who started breastfeeding in 2-23 hours after birth had a risk of neonatal death by 33% greater than babies who started breastfeeding in the first hour of birth, while babies who started breastfeeding more than 24 hours were at risk of neonatal death. 85% compared to babies who breastfeed less than 24 hours.
Conclusion

Early initiation of breastfeeding (EBI) is a simple intervention that has the potential to improve neonatal health significantly and should be universally recommended. Implementing Early Breastfeeding Initiation is a determining factor in exclusive breastfeeding and, therefore, an important foundation for optimal breastfeeding practices. EBI assistance influences the success of EBI. Assistance to mothers giving birth will increase the success of mothers giving birth to breastfeeding their babies as early as possible.

Acknowledgments
Thank you to the Politeknik Kesehatan Kementerian Kesehatan Medan for the support so that this research activity went well. Thank you to Mr/Ms. Lecturers and students who have spent time and energy carrying out this research.

Author Contributions
Designing research, conducting research, collecting data, and writing research articles, conducted data analysis, SF; Design the research and helped prepare the report and research instruments, SK.

Funding
This research was funded by Politeknik Kesehatan Kementerian Kesehatan Medan with the SK Number as follows: LB.01.02/01/0087.1/2022.

Conflicts of Interest
The author declares that all authors have no conflict of interest. Thank You.

References
Environmental Research and Public Health, 19(22), 14804. https://doi.org/10.3390/ijerph192214804


Perez-Escamilla, R. (2020). Breastfeeding in the 21st century: How we can make it work. Social Science & Medicine, 244, 112331. https://doi.org/10.1016/j.socscimed.2019.05.036


