DOI: http://dx.doi.org/10.33846/hn70505
http://heanoti.com/index.php/hn

LITERATURE REVIEW
URL of this article: http://heanoti.com/index.php/hn/article/view/hn70505

Delay Early Initiation of Breastfeeding (EIBF) After Cesarean Delivery

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ABSTRACT

The cesarean delivery rate has increased globally, exceeding the standard cesarean delivery rate set by WHO. The average cesarean birth rate is 27% in 19 high-income countries with an average rate of 14 to 33% in each country. Cesarean delivery that is not based on strong medical indications has short-term and long-term health consequences. Among them is the failure of early breastfeeding initiation, which is very important for the growth and development of newborns. The purpose of this review is to see the relationship between cesarean delivery and Early Initiation of Breastfeeding (EIBF) and to see the factors that most play a role in the success of early initiation of breastfeeding after cesarean delivery. This review is based on Pubmed, Scopus, and Google Scholar data. The data is generalized and extracted into Table 1 based on factors related to the implementation of Early Breastfeeding Initiation in women with cesarean deliveries. More attention is needed on the physical, psychological and physiological recovery of lactation in women after cesarean delivery so that the interventions carried out for the success of early breastfeeding initiation can be implemented effectively.

Keywords: early initiation breastfeeding; cesarean delivery

INTRODUCTION

Delivery by cesarean section is often the preferred delivery option compared to vaginal delivery. This has led to a drastic increase in cesarean deliveries in many countries. (1) Like the UK, between 2013 and 2014, the birth rate by cesarean section reached 26%, an increase compared to 1990, which was 12%.(2) The United Arab Emirates (UAE) has increased from 10% in 1995 to 24% in 2014. 2014.(3) In Puerto Rico, the cesarean section rate in 2004 was 47.7%, a very large increase compared to 1970 when the cesarean section rate was only 6%. Canada, 27.1% in 2012, up from 17.6% in 1995, and China rose from 3.4% in 1988 to 39.3% in 2008. Likewise in Indonesia, the number of births by cesarean section based on RISKESDAS data for 2018 was 17.6% and in 2013 9.8%. (4) This increase in number is contrary to the average standard for cesarean delivery in a country that has been set by WHO, which is 5-15 percent per 1000 births in the world. (1) Delivery by a cesarean section which should be performed vaginally can harm the neonatal and the mother. One of them is having a direct impact on the success of early breastfeeding initiation. (5) The results of a study by Hobbs et al, 2016 in Calgary, Alberta showed that women who gave birth by cesarean section tended to be unwilling to do EMI by 7.4%, and were late for EMI by 4.3%. This number is more when compared to women who gave birth vaginally, namely 3.4% and 1.8%. The proportion of difficulty breastfeeding in women who gave birth by cesarean section was 41% higher than in women who gave birth vaginally, which was 29% .(6) KC Evans et al., 2003 study showed that women who gave birth via cesarean section had lower milk volume than women who gave birth vaginally, thus affecting early breastfeeding success.(7) In line with this, the proportion of EIBF globally is still low, namely 42%. It is estimated that 78 million newborns do not have EIBF, meaning that only two out of five children have EIBF.(8)

This is quite unfortunate considering that early initiation of breastfeeding has a short- and long-term role in the baby's and the mother's health.(9) EIBF can prevent 22% of infant deaths in the first hour at the age of under 28 days and prevent 16% of infant deaths under 28 days if the baby breastfeeds for the first time over 2 hours and under 24 hours. The World Alliance for Breastfeeding Action (WABA) states that early initiation breastfeeding followed by exclusive breastfeeding will save around 1 million babies per year (Hernawati, 2008). Conversely, the longer breastfeeding is given, the greater the risk of death. Where delaying EIBF within 2-23 hours has a risk of increasing death by more than 2 times.(8)

METHODS

This type of study was a literature review with a narrative approach that tried to explore the results of domestic and foreign research related to the successful implementation of EIBF in babies born by cesarean section. This writing was done using a journal or article approach, books, and e-books that are relevant and accurate, which were marked as having been published in a trusted journal and already have a DOI (Digital Object Identifier). In the literature search process, the author collected articles from electronic databases including Pubmed, BMC, Scopus, Google Scholar, and others published in English and Indonesian. The minimum span of time was the last 10 (ten) years, namely from 2013 to 2023. The key question terms used in the integrative review literature were early breastfeeding initiation and cesarean section. The integrative review steps used in this study were problem identification (question formulation), literature search, data evaluation, data analysis, and reporting. The inclusion criteria in the integrative literature review were articles in English and Indonesian, with qualitative, quantitative, or mixed methods research (quantitative and qualitative), regarding the early initiation of breastfeeding in delivery by caesarean section. Exclusion criteria in an integrative literature review were written in languages other than English and Indonesian, not complete papers, and published more than the last ten years Eligibility for article inclusion criteria is determined by a structured flowchart and detailed guidelines using the PRISMA Flowchart can be seen in figure flow chart depicting study selection (figure 1).

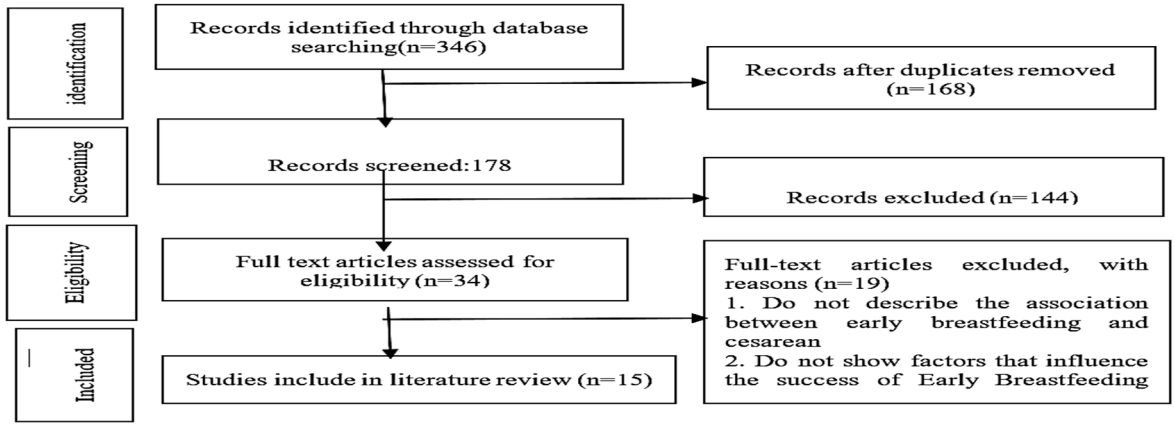

Figure 1. Flowchart of literature search performed

RESULTS

This section describes the results and analysis of the e-review literature using databases namely PubMed, Science Direct, ProQuest, Garuda Journal, and Google Scholar, as well as general characteristics in selecting literature review studies. The results and analysis of the articles from the review can be seen in table 1.

Table 1. List of articles and search results

Title, author	Methods	Results
The Relationship of Caesarean Section and the Failure of Early Initiation of Breastfeeding in Indonesia: An Analysis of 2017 IDHS Siti Masitoh, Siti Nurokhmah Journal of Media Penelitian dan Pengembangan Kesehatan [5]	Design; Cross-Sectional, Instruments: questionnaire, interview, Analysis: logistic regression, Sample: 6,877 based on secondary data from the 2017 IDHS Variable Dependents: early initiation of breastfeeding, Variables Independent: method of delivery (vaginal delivery and cesarean delivery), Covariates: age, education, occupation, residence, parity, history antenatal care, place of birth, and wealth index	Delivery by cesarean section has a negative correlation with Early Breastfeeding Initiation, which has a 7.16 times higher probability of not having Early Breastfeeding Initiation (AOR=7.16; 95% CI: 3.66-14.01) compared to women who give birth vaginally. Comparison of the number of women who did not perform Early Breastfeeding Initiation in women who gave birth by cesarean compared to vaginal delivery was 82.75% and 62.75%.
The Impact of Caesarean Section on Breastfeeding Initiation, Duration and Difficulties in the First Four Months Postpartum, Amy J. Hobbs1, Cynthia A. Mannion, Sheila W. McDonald, Meredith Brockway and Suzanne C. Tough, Journal of Pregnancy and Childbirth [6]	Design: Cohorts, Instrument: questionnaires, Analysis: chi-square test, logistic regression Samples: 3021 women who gave birth to a single baby Variable Dependent: Early initiation of breastfeeding, Variables Independent: method of delivery (vaginal, planned cesarean delivery, emergency cesarean delivery)	Women who gave birth by planned cesarean section did not do EIBF 7.4% and did not have the intention to carry out Early Breastfeeding Initiation 4.3%, greater than women who gave birth vaginally, namely 3.4% and 1.8%, and in women who delivered by emergency cesarean section 2.7% and 2.5%, respectively. Women who gave birth by emergency cesarean section experienced breastfeeding difficulties with a higher proportion of 41%, and used more resources before (67%) and after (58%) leaving the hospital, when compared with vaginal delivery (29%, 40%, and 52%, respectively) or planned c-sections (33%, 49%, and 41%, respectively).
Factors Associated with Early Breastfeeding Initiation among Women Who Underwent Cesarean	Design: a prospective cohort, Instrument: Questionnaire, Analysis: simple and multiple logistic regression, Samples: 195 samples	The percentage of doing Early Breastfeeding Initiation within one hour after cesarean delivery was 73% within 24 hours 15.8% and ≥ 24 hours 10.5%. Early Breastfeeding Initiation has a

Title, author	Methods	Results
Delivery at Tertiary Hospitals in Kelantan, Malaysia, Nazirah Johar, Noraini Mohamad, Norkhafizah Saddki, Tengku Alina Tengku Ismail, Zaharah Sulaiman, Korean Journal of Family Medicine (22)	Variable Dependents: Early initiation of breastfeeding, Variables Independent: socio-demographic characteristics, previous obstetrics and breastfeeding profile, current obstetrics profile, information regarding current cesarean delivery, the experience of breastfeeding within the first 24 hours after surgery, and type of feeding method before discharge.	significant relationship with skin contact between mother and baby (odds ratio [OR],14,42;95% confidence interval [CI],3,58-58,060, mothers who breastfeed exclusively during hospitalization (OR,36,37;95% CI,5,60-236,24), and babies who are not sleepy during breastfeeding (OR, 5, 17; 95% CI, 1, 32-20, 21).
Timely Initiation of Breast Feeding and Associated Factors among Caesarian Section Delivered Mothers in Health Facilities of Dessie City Administration, North Eastern Ethiopia' Roza Shiferaw, Sisay Eshete Tadesse, Journal of Pediatrics (12)	Design: Cross-sectional, Instrument: Questionnaire, Analysis: binary logistic regression, Samples: 421 samples Variable Dependent: Early initiation of breastfeeding, Variables Independent: socio-demographic characteristics (maternal age, neonatal sex, place of residence, religion, mother's education, mother's occupation), obstetrics, medical factors, information and cultural factors (knowledge, counseling during follow-up ANC, frequency of ANC visits, EIBF information, medical facility)	There was a significant relationship between counseling during antenatal care (AOR = 3.32; 95% CI: 1.80, 6.13), the facility where cesarean section (CS) was performed (AOR = 2.55; 95% CI: 1.57, 4.14), and post-CS counseling (AOR = 6.93; 95% CI: 3.99, 12.02) with the practice of early initiation of breastfeeding after cesarean delivery. The results of the study show that the rate of initiation of early breastfeeding after cesarean delivery is 57%. Health promotion regarding timely breastfeeding needs to be encouraged as an effort to strengthen the early initiation of breastfeeding in health facilities
Cesarean Delivery as a Barrier for Breastfeeding Initiation: The Puerto Rican Experience Naydi Perez Rios MS, Gilberto Ramos Valencia DrPH, Ana Patricia Ortiz Ph D, Journal of Human Lactation	Design: Cross-sectional, Instruments: Questionnaire, Analysis: logistic regression, Samples: 1695 samples Variable Dependent: Early initiation of breastfeeding, Variables Independent: birth type, demographic characteristics; Additional Nutrition for Women, Infants and Children (WIC) Program Participation; clinical diagnosis during pregnancy; cesarean section preference and experience; and hospital practice	Birth by cesarean section had a negative correlation with Early Breastfeeding Initiation (odds ratio = 0.64; 95% CI = 0.51–0.81). The rate of Early Initiation of Breastfeeding from 36% of cesarean deliveries as a whole is 61.5%. More active education is needed to increase mother's knowledge regarding the benefits of EIBF and the effect of Caesarean delivery on the success of EIBF.
The Relationship between Anxiety and the Implementation of Early Breastfeeding Initiation for Post Sectio Caesarea (Sc) Mothers in the Edelweiss Room at Jombang Hospital, Ruchul Kurnia acharya, Sestu Retno, Midwives Journal (19)	Design: Cross-sectional, Instruments: questionnaire, Analysis: Mann Whitney Samples: 37 samples Variable Dependent: Early initiation of breastfeeding, Variables Independent: anxiety in mothers after delivery by cesarean section	The results of the study showed that in all samples that gave birth by cesarean delivery, only three samples succeeded in carrying out EIBF, because most respondents were not exposed to information about Early Breastfeeding Initiation, the lack of the role of health workers in the operating room in helping mothers to carry out EIBF. Mann Whitney's analysis of the variables studied is the value of ρ = 0.594
Factors Associated with Post SC Mothers in Breastfeeding Their Babies in the Mawar Room of RSUD DR. H. Soewondo Kendal, Ahmaniyah, Jurnal Kesehatan Wiraraja Medika (9)	Design: Cross-sectional, Instrument: Questionnaire, Analysis: chi-square Samples: 30 samples Variable Dependent: breastfeeding behavior of post-SC mothers, Variables Independent: Pain/pain in the breast, cracked nipples, feeling tired, Breast milk does not come out, and Fear of movement/fear of the stitches coming off.	There is a significant relationship between early initiation of breastfeeding and the mother's physiology and psychology (feeling of fear of the stitches coming off so that she is afraid to move, anxiety about the milk not coming out, feeling tired after delivery) after cesarean delivery, where the p-value obtained after the Chi-Square test is <0.05, i.e. p=0.019. For this reason, the physical and mental readiness of the mother is needed as well as support from the family and health workers in helping the mother initiate early breastfeeding after cesarean delivery
Prevalence and Associated Factors of Caesarean Section and its Impact on Early Initiation of Breastfeeding in Abu Dhabi, United Arab Emirates, Taha, Zainab; Ahmed Ali Hassan; Wikkeling-Scott, Ludmilla, Papandreou, Dimitrios, Journal of Nutrients (3)	Design: Cross-sectional, Instruments: structured questionnaires, interviews, Analysis: descriptive and inferential, logistic regression, Samples: 1822 samples Variable Dependent: breastfeeding behavior of post-SC mothers, Variables Independent: sociodemographic characteristics (eg, age, parental education, occupation, sex of the child), body mass index (underweight, normal, obese)	Delivery method is one of the factors that influence the success of EIBF. Study results show an increase in deliveries by cesarean section in Abu Dhabi causes low EIBF implementation. Comparison of the rate of Early Breastfeeding Initiation between vaginal delivery, delivery by planned cesarean section, and delivery by emergency cesarean section was 804 (79.2%) 95% confidence interval (CI) (76.4, 82.0), 162 (16.0) %) 95% CI (10.4, 21.6), and 49 (4.8%) 95% CI (1.2, 10.8). Vaginal delivery with a score of 2.78 (Adjusted Odds Ratio (AOR)): CI (95%), (2.17–3.56, p <0.001) times more likely to initiate early breastfeeding.
Effect of cesarean section on initiation of breastfeeding: Findings from 2016 Ethiopian Demographic and Health Survey.Getnet GedefawI, Martha H. Goedert, Eskeziaw Abebe, Asmamaw Demis. PLoS ONE (11)	Design: Cross-sectional, Instrument: questionnaire, Analysis: logistic regression Samples: 7115 samples Variable Dependent: early initiation of breastfeeding, Variables Independent: socio-demographic factors, Characteristics of midwifery and reproductive health, Neonatal characteristics	Cesarean delivery has a negative correlation with the success of early initiation of breastfeeding. Several factors that have a significant relationship with delays in early breastfeeding are cesarean delivery [AOR = 4.06 (95% CI, 2.66–6.2)], primiparous mothers [AOR = 1.45 (95% CI, 1.13) –1.7)], and had an unplanned pregnancy [AOR = 1.35(95%CI, 1.1–1.65)]. Women aged 20 to 34 years have a lower chance of initiating early breastfeeding.
Cesarean sections and early initiation of breastfeeding practices in tertiary care hospitals of Islamabad. Urooj Aqeel, Ramesh Kumar, Ukasha Ishfaq. Journal of the Pakistan Medical Association (21)	Design: Cross-sectional, Instrument: questionnaire, Analysis: logistic regression Samples: 150 samples Variable Dependent: early initiation of breastfeeding, Variables Independent: Baby met mother (hours), Time interval Breastfeeding started after Caesarean section (hours.) Reason for not breastfeeding within an hour, Skin to skin contact, Breastfeeding help from hospital staff, breastfeeding physical factors, Breastfeeding emotional factors	The prevalence of babies who did not do EIBF was 63.3% with the reason that 69.3% was because the mother was in a different room from her baby, namely the recovery room after cesarean delivery. New mothers are met with their babies more than 1 to five hours after delivery, so 94% of EIBF failures are because babies are given formula milk. Another reason for delaying EIBF is that the mother experiences 98.7% pain from the surgical incision

DISCUSSION

Breastfeeding is a physiological process of providing a mother's milk as a quality source of nutrition to support the optimal health, growth, and development of infants. Mother's milk contains fat, protein, and water with the right composition and has many advantages that cannot be imitated by any other formula. In the first 20 to 30 minutes of life, newborns have a reflex movement of crawling toward the mother's breast to suckle, which is known as the breast crawl. This reflex will decrease over the next few hours. If EIBF is successfully carried out, it allows the provision of immunoglobulin and colostrum which are rich in bioactive molecules which are very important for immunity, growth, and development of newborns increases the bond between mother and baby, has short and long-term benefits for the mother because it reduces postpartum bleeding, restores uterine size as before pregnancy, reduces the risk of postnatal obesity, increases the period of birth spacing and reduces the risk of osteoporosis, breast and ovarian cancer and plays a role in reducing newborn mortality. (10-12)

Initiation of early compiling is carried out by placing a newborn that has previously been dried in a prone position on the mother's stomach or chest. The baby's hands are not dried and are allowed to remain coated with white fat (vernix). Mother and baby are covered, and the baby can be put on a hat to prevent loss of baby's body heat. The baby's skin is in direct contact with the mother's skin, and the baby is allowed to find the mother's nipple on her own to suckle for one hour. (13) When the baby is successful at suckling, the baby will get colostrum which is rich in antibodies to maintain intestinal growth and prevent infection which is needed for baby development. Touch, sucking, and brushing the baby on the mother's nipples will stimulate the production of the hormone oxytocin which plays a role in uterine contractions, reduces bleeding, facilitates milk production, and stimulates other hormones that make the mother more relaxed.(7,13)

Cesarean delivery is a method of delivery by making incisions in the abdominal wall and uterus which must be based on strong medical indications such as fetal distress, the baby being in an abnormal position, and vaginal delivery is not possible. The decision to choose the cesarean delivery method requires the wisdom of the mother and health workers who assist with the delivery considering that this method has short-term and long-term impacts. (13) (14)(15)(16) Cesarean delivery can have a direct impact on the Early Initiation of Breastfeeding in addition to other health consequences such as the mother's risk of experiencing bleeding, post-delivery infection, ectopic pregnancy, and children who are more at risk for respiratory problems and obesity as adults.(17) Women with cesarean delivery (95% CI, 1.57–13.92; P=0.005) had a 4.68 times higher likelihood of not carrying out Early Breastfeeding Initiation compared to women with vaginal delivery. (18) Many factors influence the success of early breastfeeding initiation in women with vaginal delivery. cesarean. Based on table 1, some articles discuss influencing factors based on the results of research that has been done before, namely sociodemographic factors (level of knowledge, education, area of residence, marital status, age), parity, anxiety, pain after cesarean section, the influence of anesthesia on cesarean deliveries, milk production after cesarean deliveries, invasive procedures, rooming in was not done, psychological factors of the mother, history of ANC, false beliefs about EIBF, the baby looks sleepy, family support, and support from health workers. However, overall, most of the results of the study stated that the level of knowledge of mothers about EIBF, physical and psychological conditions after cesarean delivery, production of mother's milk after cesarean delivery, the effect of chemical drugs given during cesarean section, and family support and health workers were the factors that most influenced the occurrence of Early Initiation of Breastfeeding in cesarean deliveries.

Physical and Psychological Conditions of Mothers after Cesarean Delivery

A cesarean section procedure is a process of giving birth by making an incision in the skin, abdominal wall, and uterine wall of the mother as a way for the baby to come out. This causes cesarean delivery to require a longer recovery time than vaginal delivery because it has the potential to cause serious complications such as pain in the area of the incised skin during an episiotomy, uterine bleeding, and infection. (19) Women who give birth by cesarean section are reluctant to initiate early breastfeeding because, in the first two days after giving birth, the mother is still focused on her physical condition. (20,21) The incision in a cesarean section leaves pain, where the perception of pain in women with cesarean delivery is 3.3 times greater than that of normal delivery. (5)

Pain after cesarean delivery affects the implementation of early initiation of breastfeeding because the condition of the mother who is still weak causes the mother's ability to hold her baby while breastfeeding, breastfeeding, and looking after her baby to be reduced. The mother's mobility is also still limited for fear that the surgical stitches will come off so the mother will find it difficult to position her baby in the right position during the Early Breastfeeding Initiation process. Research by Johar et al., 2021 showed that as many as 30% of women who gave birth by cesarean section had difficulty attaching their babies to the mother's breast due to difficulty moving by 49.1% and because of pain in the surgical site as much as 38.1%. (22) Results Similar findings were conveyed in the study of Retno et al (2016) which stated that mothers did not perform Early Breastfeeding Initiation due to pain due to cesarean section incisions (92%), discomfort (78%) and effects of anesthesia (74%).

The disturbed physical condition of the mother after cesarean delivery can arise from a feeling of anxiety when not being admitted to the baby. Room-in is a combination of babies and mothers in the same room to carry out Early Breastfeeding Initiation, providing opportunities for mothers to care for their babies as early as possible, and fostering mother instinct. Room-in has a positive correlation with Early Breastfeeding Initiation, where mothers can continue to be with their babies so they encourage mothers to breastfeed their babies as early and often as possible. (23) When breastfeeding, there is skin-to-skin contact which can stimulate the hormone prolactin to produce breast milk. The more frequent physical contact occurs, the smoother the milk production and the easier it is to carry out early breastfeeding. (24) In cesarean deliveries, group-patient care is often not performed because the mother's condition requires intense recovery and some newborns have health problems such as hypothermic babies or the baby cannot breathe spontaneously, so the baby is put in an intensive room like the NICU. The results of the study by Cordero et al (2013) showed that newborns who are treated in the NICU are vulnerable to not having Early Breastfeeding Initiation. The physical and emotional separation of the mother and baby causes the mother to become depressed. As a result, catecholamine and adrenaline in the blood increase, and the release of prolactin and oxytocin from the anterior and posterior pituitary becomes obstructed, so the secretion of breast milk becomes not smooth. The psychological condition of the mother who is not calm and the lack of skin-to-skin physical contact as well as the interaction between mother and baby from an early age will cause Early Breastfeeding Initiation to be hampered. (13) Study results show that women who make skin-to-skin contact immediately after cesarean delivery have the possibility of EIBF 14.42 times compared to those who did not make skin-to-skin contact immediately, a maximum of one hour after cesarean delivery. (22)

Effect of Chemical Drugs Given during Cesarean Section

Chemical drugs such as anesthetics and analgesics can hinder the implementation of early initiation of breastfeeding because these chemicals can reach the fetus through the placenta, causing the newborn to be drowsy and less responsive to move naturally looking for the mother's breast when breastfeeding early. (19) A baby who is sleepy during EIBF makes the mother frustrated because the mother thinks the baby does not want to breastfeed. After all, the milk is not coming out. The results of Sayer's study stated that as many as 17% of mothers did not succeed in doing EIBF because the baby was sleeping. For this reason, health workers who assist with deliveries need to educate mothers that babies are sleepy only temporarily and can be awakened so they want to breastfeed by opening the cloth that wraps them and bringing the newborn's hands closer to their mouths. When the baby begins to show a response to suckling, the mother needs to massage the breasts to prevent the milk from coming out which causes the baby to stop suckling. (22)

Administration of anesthesia during cesarean delivery influences the implementation of Early Breastfeeding Initiation, especially for women with general anesthesia. Where EIBF cannot be done because the patient is unconscious during the operation and only wakes up when he is placed back in the postpartum room. (24) (25) (26) In women with cito cesarean delivery, EIBF cannot be carried out because the mother does not fast first, so the administration of anesthesia causes nausea for up to 2 hours after delivery.(25) The type of anesthesia that is often used in cesarean delivery is spinal anesthesia which has a good effect on sensory and motor blockade. However, this spinal anesthesia can cause hypotension which is more at risk in pregnant women. For this reason, position manipulation and preloading of colloid and crystalloid fluids are carried out to prevent post-spinal hypotension. (27) Lidocaine and bupivacaine are a class of amide drugs that are often used as anesthetics for cesarean delivery. For anesthesia, the dose of lidocaine 75 mg + adrenaline 0.1 mg has a moderate duration of action, while bupivacaine 45 mg + 0.1 adrenaline has a long duration of action. With this dose, the average pain level in women with cesarean delivery is at 1-2 on a mild pain scale. However, most mothers are reluctant to carry out Early Breastfeeding Initiation because they feel tired, uncomfortable because they are still using a catheter, and afraid to move because they are worried that the stitches will come to off. (13,24)

Apart from anesthesia, other chemical drugs that are often given to women with cesarean delivery are analgesics for pain management. The types of analgesics used are non-opioid analgesics, acetaminophen, ibuprofen and ketorolac, and meperidine. Ibuprofen is the most frequently used type of analgesia after cesarean delivery because it has a half-life of 1.8 hours and does not have a sedative effect on the mother and baby. Giving meperidine requires special consideration because it causes a risk of neonatal respiratory sedation if consumed by postpartum breastfeeding mothers. (26)

Production of Mother's Milk after Cesarean Delivery

Mother's milk production in women with cesarean delivery is slower than in women with vaginal delivery so it can hinder the implementation of Early Breastfeeding Initiation. This is influenced by several factors, namely maternal factors, infant factors, psychological factors, and socio-cultural factors. The baby factor is associated with the ability to suck the baby when breastfeeding which can stimulate the hormones prolactin and oxytocin. Maternal factors include the nutritional status of the mother, physical condition, age of the mother at delivery,

parity, the mother's perception of lactation, and the condition of the breast or nipple. [20,28] Socio-cultural factors are associated with the existence of erroneous beliefs regarding the early initiation of breastfeeding. The results of a study conducted at R. Goeteng Hospital Taroenadibrata stated that the reluctance of mothers to do EIBF was because the first milk that came out (colostrum) was dirty, so mothers delayed giving breast milk immediately. Mothers' wrong perception of colostrum causes mothers to choose another alternative, namely formula milk as a substitute for breast milk for their babies. Delaying breastfeeding and replacing breast milk with formula milk causes the flow of breast milk to decrease and causes EIBF failure. [29]

Breast milk production is strongly influenced by the hormones prolactin and oxytocin. [6] The hormone prolactin functions to produce breast milk, while the hormone oxytocin functions to facilitate the release of breast milk in postpartum mothers. to maintain it, the hormone oxytocin is needed which can be stimulated through the baby's suction during Early Breastfeeding Initiation. With EIBF, prolactin does not have time to go down so the colostrum that is needed by the newborn quickly comes out. [24] Women with cesarean deliveries often experience postpartum stress because of the pain and discomfort they feel. Stress, anxiety, and pain due to pain stimulate the release of adrenaline resulting in vasoconstriction of the alveoli blood vessels. The amount of the hormone cortisol increases, and as a result, the production of the hormone oxytocin decreases and causes breast milk production to be hampered. As a result, breast milk does not come out so newborns do not get the nutrition they need and causing failure of early initiation of breastfeeding. [9][20]

Mother's Level of Knowledge about EIBF

The biggest obstacle in doing EIBF is caused by the lack of knowledge about the correct way and position for breastfeeding, how to attach the baby, and how to care for the breast so that milk production runs smoothly when breastfeeding. All of this can be obtained from various sources of information that will shape the perceptions and attitudes of mothers toward EIBF. [5,30] During pregnancy, mothers can obtain a lot of information from the Ante Natal Care services provided by Health Service Facilities. History of Ante Natal Care (ANC) has a significant relationship with the success of Early Initiation of Breastfeeding in women with cesarean deliveries. Mothers who carry out examinations during pregnancy or ANC are three times more likely to do EIBF than women who have never received ANC services. [12] History of Ante Natal Care for women with cesarean deliveries ANC examinations are carried out at least 6 (six) times, namely once a time in the first trimester, 2 (two) times in the second trimester, and 3 (three) times in the third trimester. A history of ANC has a positive correlation with EIBF because, in ANC services, mothers get various services from Health Service Facilities such as communication, information, and education services, counseling services, health screening services, immunizations, nutritional supplementation, medical services, and other health services. This encourages mothers to find out more about EIBF actively, both through health workers (midwives or doctors) and through information media through magazines or the internet.

In cesarean delivery where the condition of postpartum mothers is different from vaginal delivery, the counseling and education obtained during ANC provide knowledge and skills that can help mothers to breastfeed their babies in the first hour after giving birth. [25] For mothers planning cesarean deliveries, emphasis on the importance of Early Breastfeeding Initiation since the antenatal period should be the target of health education by every health practitioner. [11] [14] This is in line with the results of studies conducted in India and also Ankara, Turkey which stated that difficulties in carrying out EIBF were caused because mothers did not have sufficient information about the benefits of EIBF, preparation, and administration of breastfeeding to infants immediately after delivery, so mothers were less motivated to do EIBF.[5,31]

Family Support and Health Workers

The results of previous studies show that support from family and health workers influences the success of Early Breastfeeding Initiation in Women with cesarean deliveries. [32] In cesarean deliveries, most mothers experience difficulties, especially in the first 24 hours after giving birth. Midwives as health workers who intensely accompany mothers during and after delivery play a very important role in facilitating mothers to carry out Early Breastfeeding Initiation. [21][33] The results of a study at a Referral Hospital in Jakarta show that the positive attitude of midwives has a significant relationship with the practice of early initiation of breastfeeding. Midwives who show a positive attitude such as actively providing information about EIBF, assisting in the implementation of EIBF in post-cesarean delivery mothers, and urging mothers not to give formula milk to babies have a positive correlation with EIBF success. The results of this study are supported by qualitative research conducted in Solok Regency, West Sumatra, which showed that the lack of EIBF implementation was caused by a lack of EIBF facilities by midwives. [34] Support from health workers for EIBF depends on the length of work or experience possessed, level of knowledge, and training received by health workers. Length of work is tenure and work experience that can affect one's skills. Someone with a long working period will have broader insights and have a significant relationship with the implementation of EIBF. The results of Ismarina's research (2014) showed

midwives with a p-value = 0.016 (p <α 0.05). The OR results are known to be 6,500 (95% CI = 1,594-26,511) which means that respondents who have worked for ≤5 years are at risk of not implementing EIBF after delivery by 4,773 times greater than respondents who have worked for >5 years.

The percentage of EIBF in women with cesarean deliveries is low due to the limited number and competence of health workers in helping mothers carry out EIBF. [5,33] For this reason, the 10-step Baby-Friendly Hospital Initiative is currently being promoted, which incorporates counseling and facilitation for women after cesarean delivery as an intervention for the success of the EIBF program. [35] This program was first introduced by WHO in 1991. Ten (10) initiative steps This Baby-Friendly Hospital consists of 1. Having written regulations that have been socialized to all Hospital HR, 2. Providing training to HR to implement these policies, 3. Providing information to mothers regarding the benefits of early breastfeeding, 4. Helping mothers carry out breastfeeding early half an hour after giving birth, 5. Showing the mother how to breastfeed and maintaining the duration of breastfeeding when the mother and baby must be separated, 6. Newborns are only given breast milk, and may not provide other intakes such as formula milk unless there is a medical indication, 7. Carry out hospitalization, 8. Advise breastfeeding on demand, 9. Do not give pacifiers or pacifiers to babies, 10. Encourage the formation of breastfeeding support communities as a reference for mothers when they are discharged from the hospital. [35]

CONCLUSION

Women with cesarean delivery have more attention to initiating early breastfeeding. This is because the physical, psychological, and physiological conditions of women with cesarean delivery are different from women who give birth vaginally. The success of EIBF in cesarean deliveries is strongly influenced by the mother's internal and external factors. For this reason, Health Service Facilities where mothers give birth must have the right strategy and build good communication with patients and patient families for the effectiveness of interventions for the success of the Early Breastfeeding Initiation Program after cesarean delivery.

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