The Effect of Early Breastfeeding Initiation on the Length of the Third Stage of Labor

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Abstract: Postpartum hemorrhage is the second leading cause of maternal death in Indonesia. In 2022, the bleeding rate in Central Java was 22.5%. The government's efforts to prevent postpartum hemorrhage are active management of the third stage (giving oxytocin 10 IU immediately after the baby is born IM), but until now postpartum hemorrhage still contributes to maternal mortality. Natural efforts made to prevent bleeding are Early Initiation of Breastfeeding (IMD). Early initiation of breastfeeding is the process of giving newborns the opportunity to find their own nipples by placing the baby on the mother's chest to start breastfeeding during the first hour of giving birth. The IMD process can stimulate the back of the pituitary gland to produce natural oxytocin which can stimulate uterine muscle contractions. The purpose of the study was to determine the effect of Early Initiation of Breastfeeding on the Length of the Third Stage in mothers in labor. This research method uses a Quasy experimental with a Post-test Only Control Group Design, the study population is all mothers who gave birth in February - April 2023 at Ibu Alam Salatiga with an accidental sampling technique, the data used in this study is primary data, namely data obtained from direct observation respondents. Research analysis using the Mann Whitney test. The results of the study showed that there was a significant effect of early breastfeeding initiation on the length of the third stage in mothers giving birth with a p value of 0.001 (p value <0.05). Conclusion There is an effect of early breastfeeding initiation on the length of the third stage.

Keywords: Early Breastfeeding Initiation, Length of the Third Stage

INTRODUCTION

Post partum hemorrhage is the leading cause of maternal death in Indonesia. In 2022, the hemorrhage rate in Central Java was 22.5%. The most frequent causative factors of bleeding are uterine atony and placental retention, cervical or vaginal laceration, uterine rupture, uterine inversion and puerperal infection. Post partum hemorrhage can be prevented by early initiation of breastfeeding (Provincial Health Office, 2022).

Early initiation of breastfeeding is when a baby starts to feed itself immediately after birth, because basically babies, like other mammals, have the ability to feed themselves. (Indonesian Ministry of Health, 2021). As long as direct contact between the baby's skin and the mother's skin is allowed, for at least one hour immediately after birth. The way the baby does this Early Initiation of Breastfeeding is called "The Breast Crawl" (crawling for the breast and feeding itself). Early initiation of breastfeeding is very beneficial for the mother and fetus to increase the affectionate relationship between mother and baby. (Sukarti et al., 2020), reduce the risk of postpartum hemorrhage, and greatly assist in the continuity of breastfeeding and breastfeeding duration (an excellent initial stage in exclusive breastfeeding for the first 6 months).(Santi, 2017).

The Government of Indonesia supports WHO and UNICEF policies that recommend early initiation of breastfeeding as a "life-saving" measure, with early initiation of breastfeeding saving 22% of babies who die before one month of age. Breastfeeding in the first hour of life, which begins with skin- to-skin contact between mother and baby, is very important for the baby's survival and can increase the baby's immunity and prevent malnutrition. Where when the baby is placed on the mother's chest, he is right above the mother's womb (Mastuti et al., 2017). This helps compress the placenta and shrink the mother's uterus, so that the placenta can be released quickly.

Efforts made to prevent postpartum hemorrhage are given oxytocin, where oxytocin has an important role in stimulating uterine smooth muscle contractions to prevent bleeding. The results of research conducted by Thornton et al stated that oxytocin can be produced by the body naturally during the labor process (Kandari & Sikki, 2021). Oxytocin hormone levels will increase in stage III after placental detachment, when IMD is performed the hypophysis gland secretes the hormone oxytocin through pounding, touching and licking the baby on the mother's skin which causes faster placental detachment thereby preventing post partum hemorrhage.)(Agampodi et al., 2021).

METHODS

This research method uses Quasy experimental with Post-test Only Control Group Design. The population of this study were all mothers who gave birth in February - April

2023 at Ibu Alam Salatiga. The sample was taken by accidental sampling technique, a total of 40 mothers who were divided into two groups, namely the intervention group of 20 respondents and the control group of 20 respondents. In the intervention group, EIB was done for 1 hour, while in the control group EIB was not done. The duration of the third stage of labor was measured from the complete birth of the baby until the birth of the placenta, measured and recorded in minutes. Both groups of data have been tested for data normality with results (0.004 & 0.001). So that the 2 group difference test uses the alternative Man Whitney test.

RESULTS

Table 1. Characteristics of laboring mothers in mother Nature

Characteristics	Number (n)	Percentage (%)
Age		
< 25 Years	4	10%
25 - 30 Years	2	52,5%
>30 Years	1	37,5%
	1	
	5	
Parity Primiparous		
Multiparous	2	55%
	2	45%
	2	
	0	

Table 1 shows that most of the respondents were 25-30 years old, namely 21 (52.5%). This is in line with the results of research by Woldeamanuel, B. T. (2020) which found that the largest age group for IMD was 25-29 years. At this age, mothers are more mature in reproduction. Physical, mental and social readiness has been well achieved.

Parity of respondents was mostly primiparous 22 (55%). However, if examined closely, there was no significant difference between primiparous and multiparous. Previous childbirth experience may support EIB behavior in subsequent deliveries, but primiparous mothers have a strong motivation to perform EIB as their first experience.

Table 2. Test Results of the Effect of Early Breastfeeding Initiation on the Duration of Placenta Expulsion in Childbirth Period III

Variables	Mean	Z score	Sig
EIB	14,5	-3,425	0,001
No EIB	26,5		

Table 2 shows the average value of the length for stage III in the EIB group was 14.5 minutes, while the average length for stage III in the control group was 26.5 minutes, so the mean difference between the EIB group and not EIB was 12 minutes. The results of the Mann Whitney statistical test obtained a z score of -3, 425 and a sig p value of 0.001 (p <0.05) so that the research hypothesis is accepted, which means that there is an effect of early breastfeeding initiation on the length of stage III in Alam Salatiga mothers. The results of this study are in line with the results of research (Idwar & Magfirah, 2023) which explained that the average placental detachment in the EIB group (10.85 minutes) was shorter than the control group (24.15 minutes).

The length of placental detachment is categorized as fast < 5 minutes, normal 5-15 minutes and slow > 15 minutes after the baby is born. The rapid release of the placenta is due to several factors, one of which is IMD. (Balogun et al., 2016).. The rapid release of the placenta is caused by the movement of the baby's legs when crawling on the mother's abdomen, because when the baby crawls on the mother's abdomen the baby's legs press on the mother's abdomen so that it raises the oxytocin hormone and helps make the uterus contract and the placenta is released (Mina La Isa et al., 2016). (Mina La Isa et al., 2021). In addition, another factor that causes the acceleration of placental detachment is the condition of the bladder which is not full so that it makes uterine contractions more adequate and placental detachment occurs. There are still mothers who experience slow placental detachment due to inadequate uterine contractions which can be caused by not initiating early breastfeeding, a full bladder and parity. (Fauziah Harahap & Siregar, 2020)

In addition, for the mother, the touch and suction on the mother's breast encourages the formation of oxytocin, which has an impact on uterine contractions, thus helping the

detachment of the placenta. When the baby sucks the mother's nipple, it stimulates the sensory nerve endings that function as mechanical receptors. This stimulation is continued to the hypothalamus through the hypothalamic spinal cord so that it can spur prolactin secretion. (Mina La Isa et al., 2021).. Infant suction triggers the release of milk from the mammary alveolus through the ductus sinus lactiferus. Suction stimulates oxytocin production by the anterior pituitary gland. Oxytocin enters the blood and causes contraction of specialized cells surrounding the alveolus and lactiferous ductus(Izwar et al., 2012). This contraction pushes the milk out of the alveolus through the lactiferous duct to the lactiferoussinus where it will be stored. When the baby sucks, the milk in the sinus is pressed out into the baby's mouth. Together with the formation of prolactin by the anterior pituitary, the stimulus derived from the infant's suck is passed on to the posterior pituitary (neorohypophysis) which then secretes oxytocin. Through the bloodstream, this hormone is elevated to the uterus which can cause contractions in the uterus so that the involution of the organ and the release of the placenta occurs. The contraction of the cells will squeeze the milk that has been produced out of the alveoli and into the ductal system, then flow through the lactiferous duct into the baby's mouth. (Analysis et al., n.d.). In addition, the baby's leg movements when crawling on the mother's abdomen will help stimulate the uterus so that the myometrium muscles contract. This uterine contraction will help expel the placenta and reduce bleeding (Sharma & Byrne, n.d.). (Sharma & Byrne, 2016).

DISCUSSION

The results showed that early breastfeeding initiation is very important for laboring mothers, to accelerate the natural expulsion of the placenta. Other benefits of early breastfeeding initiation are preventing bleeding, accelerating uterine involution, speeding up the third stage of labor, increasing bounding attachment, increasing the success of exclusive breastfeeding, reducing neonatal morbidity and mortality. The achievement rate of early breastfeeding initiation has not yet reached 100%. Many obstacles in the implementation of early breastfeeding initiation include maternal factors: knowledge, education, age, parity, pregnancy complications, fetal factors: asphyxia babies, premature babies and health worker factors: knowledge, age, education, training (Mallick et al., 2020).

Given the importance of the benefits of initiation for both mother and baby, it is necessary to make efforts to improve the implementation of early breastfeeding initiation, including education on the importance of initiation to pregnant and maternity women so that in the process of delivery the birth mother plays an active role in the implementation of early breastfeeding initiation.

CONCLUSION

The results showed that there was a significant effect of early breastfeeding initiation on the duration of kala III in laboring mothers with a value of p = 0.001 (p value <0.05). Conclusion There is an effect of early breastfeeding initiation on the duration of Stage III.

Conflict of Interest

None

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