# CORRELATION BETWEEN EXCLUSIVE BREASTFEEDING IN GROUP OF EARLY INITIATION OF BREASTFEEDING ON THE DURATION OF LACTATIONAL AMENORRHEA

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## ABSTRACT

**Introduction**: Based on data from "Survei Demografi dan Kesehatan Indonesia" (SDKI) in 2012, about four percent of births occurred 18 months apart, and six percent were less than two years apart, about 75 percent occurred at least three years apart. WHO's recommendation for birth spacing is at least 24 months. A gestation interval of fewer than six months can increase maternal mortality due to premature rupture of the amniotic sac, anemia, and puerperal endometritis. The Lactational Amenorrhea Method is a natural and easy method of contraception. The LAM method is one of the contraceptive methods with a success rate of 98 percent. One of the importance of contraception, such as LAM, is to adjust the optimal birth spacing.

**Purpose**: This study aims to determine the correlation between exclusive breastfeeding in a group of early initiation of breastfeeding on the duration of lactational amenorrhea.

**Method**: This study is an observational analytic study with a retrospective cohort study design. A simple random sampling technique is used for the sampling method. The collection of data on the history of breastfeeding and the duration of amenorrhea was collected from the main research results by doing interviews with respondents.

**Results**: The results of statistical tests with Spearman correlation showed that the P-value obtained is 0.005. This value is less than p (0.05), which means a significant correlation between exclusive breastfeeding and the duration of lactational amenorrhea.

**Conclusion**: There is a significant correlation between exclusive breastfeeding in the early initiation of the breastfeeding group and the duration of lactation amenorrhea.

**Keywords**: exclusive breastfeeding, early initiation of breastfeeding, lactational amenorrhea.

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## INTRODUCTION

Early Initiation of Breastfeeding (IMD) is an action taken to help newborns get breast milk directly from their mothers within the first 24 hours after birth (1). *The World Health Organization* (WHO) and the *United Nations Children's Fund* (UNICEF) recommend that IMD be carried out in the first 1 hour after birth with a duration of 30 minutes to 1 hour to get maximum results (2). IMD benefits for mothers, such as helping to release sufficient oxytocin, accelerating the cessation of postpartum bleeding, helping smooth milk production (3), and increasing affection for the baby (4). Early Initiation of Breastfeeding will help mothers produce breast milk because the hormone prolactin will be produced when the baby sucks on the mother's nipple so that milk production can occur. This can help carry out exclusive breastfeeding for babies. Also, IMD can help contractions of the uterus due to the release of the hormone oxytocin during the breastfeeding process, so that bleeding will stop quickly (4). Proper handling of babies and mothers at birth is very important to help the success of long-term breastfeeding.

Exclusive breastfeeding is breastfeeding a baby for the first six months of life without providing other foods or drinks (5). Exclusive breastfeeding is part of the recommendation of breastfeeding, which consists of early initiation of breastfeeding during the first 1 hour of birth, exclusive breastfeeding for six months, and continued breastfeeding until the age of 2 years accompanied by complementary feeding (5). There are many benefits of exclusive breastfeeding for mothers, such as improving maternal health by accelerating the postpartum healing process and reducing breast and ovarian cancer risk. In addition, implementing exclusive breastfeeding can help control pregnancy (6). During six months of breastfeeding, the mother will experience amenorrhea, which means that menstruation does not occur. This can prevent pregnancy or is called the contraception *Lactational Amenorrhea Methodmethod* (LAM). *The Lactational Amenorrhea Method* is one of the natural and easy methods of contraception. The LAM method is included in one of the contraceptive methods with a success rate of 98 percent (7). One of the importance of contraception, such as LAM, is to adjust the optimal pregnancy spacing. A gestation interval of fewer than six months can increase maternal mortality due to premature rupture of membranes, anemia, and puerperal endometritis (8). Based on data from the 2012 Indonesian Demographic and Health Survey (IDHS), about 4 percent of births occurred 18

months apart and 6 percent less than two years, about 75 percent occurred at a distance of at least three years (9). The WHO recommendation for birth spacing is at least 24 months (8).

## METHOD

This research type is an observational analytic study, namely observing the research subject to find the relationship between variables. The study design used was method *retrospective cohort* regarding exclusive breastfeeding in the IMD group with the duration of lactation amenorrhea. The population of this study was pregnant women who gave birth at Gotong Royong Hospital, Surabaya. The sample of this study was pregnant women who gave birth at Gotong Royong Hospital Surabaya who met the inclusion criteria in the period July 2019-January 2020. The sampling technique in this study was conducted using a *simple random sampling technique*.

The inclusion criteria in this study were mothers who gave birth at Gotong Royong Hospital in Surabaya during the period July 2019-January 2020, mothers who performed IMD, babies who received exclusive or non-exclusive breastfeeding. The exclusion criteria in this study were mothers using hormonal contraceptives, babies with congenital abnormalities. These babies had bad conditions (respiratory problems, sepsis, seizures), so they had to use breathing devices.

## RESULTS

Based on the research that has been done, the following shows the respondent's characteristic data in the form of respondent age, breastfeeding pattern, and duration of amenorrhea lactation.

**Table 1. Respondents Characteristics**

| Variable | Frequency (n) | Percentage(%) |
|---|---|---|
| **Age (years old)** | | |
| 20-25 | 5 | 11,63 |
| 26-30 | 25 | 58,14 |
| 31-35 | 10 | 23,26 |
| 36-40 | 3 | 6,97 |
| **Breastfeeding pattern** | | |
| Exclusive breastfeeding | 21 | 48,84 |
| Predominant breastfeeding | 12 | 27,9 |
| Partial breastfeeding | 10 | 23,3 |
| **Amenorrhea lactation (months)** | | |
| <2 | 9 | 20,9 |
| 2-5 | 16 | 37,2 |
| ≥6 | 18 | 41,86 |

The data listed in the table shows that the age of mothers between the ages of

26-30 years is 25 people (58.14%). Then at the age of 31-35 years, there are ten people (23.26%), aged 20-25 years there are five people (11.63%), and aged 36-40 years there are three people (6.97%). In the distribution based on the history of breastfeeding, the highest amount was obtained, namely exclusive breastfeeding with 21 (48.84%), followed by 12 (27.9%) predominant breastfeeding, and 10 (23.3%) partial breastfeeding. The type of history of breastfeeding that is best and recommended is exclusive breastfeeding. In this study, the highest amount was obtained, namely exclusive breastfeeding.

In most distributions, the duration of amenorrhea is ≥six months with a number of 18 (41.86%), then 2-5 months with a number of 16 (37.2%), and <2 months with a number of 9 (20.9%).

**Table 2. Correlation between exclusive breastfeeding in the group of early initiation of breastfeeding on the duration of lactational amenorrhea**

| Variable | amenorrhea | | | | | | | | P value |
|---|---|---|---|---|---|---|---|---|---|
| | ≥6months | | 2-5months | | <2months | | Total | | |
| | n | % | n | % | n | % | n | % | |
| Breastfeed | | | | | | | | | |
| Exclucive | 13 | 61,9 | 6 | 28,6 | 2 | 9,5 | 21 | 100 | 0,005 |
| Predominant | 4 | 33,3 | 4 | 33,3 | 4 | 33,3 | 12 | 100 | |
| Partial | 1 | 10 | 6 | 60 | 3 | 30 | 10 | 100 | |

The analysis test results using the *Spearman correlation test* obtained a significance value of p = 0.005. This suggests a significant relationship between exclusive breastfeeding in the IMD group with the duration of lactation amenorrhea. The relationship between the two variables is significant if the p-value is <0.05. So, from the results of the analysis test carried out, the conclusion is that the research hypothesis is accepted.

## DISCUSSION

Based on the results of the study, the largest number of mothers who gave birth in this study at the age of 26-30 years as many as 25 people (58.14%) and the least at the age of 36-40 years as many as three people (6.97%). In this study, it is known that the mothers who became respondents in this study were mothers in the category of ready to get pregnant and give birth. Maternal age is one of the factors that influence maternal readiness in giving birth.

The ideal age for pregnancy and childbirth is 20-35 years (10). In a study conducted by Radwan (2009), the sample used was women giving birth with an age range of 26-36 years, with a small addition at> 36 years of age, and significant results were obtained between exclusive breastfeeding and lactation amenorrhea at the age of the mother> 25 years or the ideal age of the mother for childbirth (11).

Besides having a role in going through pregnancy and childbirth, the mother's age also plays a role in the readiness to breastfeed the baby

exclusively. Mothers under 35 years of age are more ready and consistent in breastfeeding exclusively to babies (12). As someone ages, a person will be better able to show mental readiness, control emotions, and be skilled in carrying out tasks. The more you get older, the more your self-maturity increases both in psychology and attitudes and behavior (13).

The results showed that 21 women (48.84%) had exclusive breastfeeding, 12 (27.9%) predominant breastfeeding, and 10 (23.3%) partial breastfeeding. Exclusive breastfeeding is the provision of breastfeeding to babies starting from birth until the baby is six months old without giving other food or drinks (14). The predominant breast milk is routine breastfeeding but has given little water or drinks that contain water, for example, prelactal drinks. Partial breastfeeding is breastfeeding but accompanied by breast milk, such as formula, complementary foods, or porridge before the baby is six months old (15).

This study shows that 48.84% of exclusive breastfeeding has met the strategic plan target in 2018, which is 47%. In 2018, the coverage of exclusive breastfeeding in Indonesia was 68.74% (16).

Psychological factors play a role in determining the amount of mother's milk production. In a study conducted by Fitrianti (2018), a poor psychological condition of the mother will result in a decrease in the production of mother's milk (17).

In this study, all samples had early initiation of breastfeeding immediately after delivery. IMD itself is beneficial. According to WHO, the implementation of IMD can increase the success of exclusive breastfeeding for up to 4 months (18). In addition, IMD can trigger prolactin production earlier so that prolactin can affect natural contraception as soon as the mother gives birth. The earlier release of prolactin also plays a role in the long-term success of exclusive breastfeeding, either in terms of milk production or mother-child relationships (19).

Data on the duration of lactation amenorrhea were obtained from interviews with mothers who had just given birth until six months after giving birth. In this study, there were 18 mothers with amenorrhea duration ≥six months (41.86%), 2-5 months as many as 16 people (37.2%), and <2 months as many as nine people (20.9%). In postpartum mothers, if breastfeeding is done exclusively, amenorrhea can last approximately six months after delivery. Some mothers can have a longer or shorter duration of amenorrhea. In a study conducted by Radwan (2009), the time of lactation

amenorrhea was longer if the mother was exclusively breastfed.

In contrast, the predominant breastfeeding was the duration of lactation amenorrhea with a standard deviation of 4.7 months (11). This shows the similarity in this study. In mothers who exclusively breastfeed, the duration of amenorrhea is ≥six months, with a percentage of 61.9%. Some of the factors that can affect the duration of lactation amenorrhea are maternal parity, maternal age, and nutrition (20).

The duration of lactation amenorrhea is closely related to the mother's prolactin levels while breastfeeding. The prolactin levels can increase shortly after the baby is born, namely by carrying out IMD within the first 1 hour of birth. During IMD implementation, prolactin levels will increase and immediately affect to prevent ovulation.

This study shows that of the 43 samples taken, most (21 people) breastfeed exclusively for six months. After correlating it with the duration of lactation amenorrhea experienced, it was found that 13 women breastfed exclusively and with a duration of ≥6 months of amenorrhea, with four people as predominant breast milk, and one person with partial breastfeeding.

In this study, the correlation coefficient value obtained using the correlation test *Spearman* was 0.422. This suggests that there is an adequate relationship between exclusive breastfeeding and the duration of lactation amenorrhea. The limit value of the correlation coefficient is 0.00-0.25 for a weak relationship, 0.26-0.50 for a moderate relationship, and 0.51-0.75 for a strong relationship. From the data obtained, it can be concluded that the duration of lactation amenorrhea will be longer if exclusive breastfeeding is done.

The results of this study are consistent with the research conducted by Radwan, Mussaiger, and Hachem (2009), which states that there is a strong relationship between exclusive breastfeeding and the duration of lactation amenorrhea with a P-value <0.05 (11). Research on the relationship between exclusive breastfeeding and lactation amenorrhea found a significant relationship because, in theory, breastfeeding after giving birth will cause a delay in the normal ovarian cycle. Stimulation of the mother's nipples during breastfeeding stimulates the release of the hormone prolactin, which will interfere with the formation or release of *Gonadotropin-Releasing Hormone* (GnRH) so that the secretion of *Follicle Stimulating Hormone* (FSH) and *Luteinizing Hormone* (LH) is also disrupted. As a result, the stimulation for

follicle maturation carried out by FSH is not optimal, and ovulation will not occur, which is usually caused by the LH surge. The formation of the endometrium, which is stimulated by the hormone estrogen, also does not occur because FSH cannot stimulate the formation of the hormone estrogen. If the endometrium is not formed, the menstrual process will not occur. The ovulation process also does not occur, so pregnancy automatically does not occur because no ovum can be fertilized by sperm (21).

A significant relationship in this study was obtained because of the very supportive theory regarding lactational amenorrhea. Besides that, the respondents in this study were in a quite ready condition in terms of age and health.

## CONCLUSION

Based on the research results that have been done, it is concluded that there is a significant relationship between exclusive breastfeeding in the IMD group on the duration of lactation amenorrhea.

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