

Correlation between Use of the Contraception and Exclusive Breastfeeding in Indonesia in 2017 (2017 Indonesian Demographic and Health Survey Analysis Data)

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Abstract

Background: Breast milk is the first need for a newborn baby. Infants aged 0–6 months who are breastfed without any other food define exclusive breastfeeding. Exclusive breastfeeding can be influenced by several factors, one of which is contraception. Inappropriate use of contraception can affect exclusive breastfeeding. **Aims:** This study aimed to determine the correlation between contraceptive use and exclusive breastfeeding in Indonesia in 2017. **Materials and Methods:** The research design in this study was descriptive-analytic with a cross-sectional approach. This study examines the population of women of childbearing age who are married and have their last child aged 0–6 months with a total sample of 1891 people, with a sampling technique using total sampling. The data were taken from the results of the 2017 Indonesian Demographic and Health Survey. The data analysis of this study used the Chi-square statistical test. **Result:** The results of data analysis showed that 53% of women of childbearing age used contraception, and 47% of women of childbearing age did not use contraception. Meanwhile, 46% of women of childbearing age gave exclusive breastfeeding, and 54% of women of childbearing age did not give exclusive breastfeeding. The Chi-square test results showed a $P = 0.000$ ($P < 0.05$). **Conclusions:** Based on the study results, it can be concluded that there is a correlation between contraceptive use and exclusive breastfeeding in Indonesia in 2017.

Keywords: Contraception, exclusive breastfeeding, women of childbearing age

INTRODUCTION

The first need needed by a newborn baby is breast milk given by the mother. Exclusive breastfeeding is recommended for infants up to 6 months of age without any other food. After 6 months, the baby is given additional food, and breastfeeding is also continued until the child is 2 years old.^[1] Tama *et al.* stated that two out of five newborns in Indonesia did not get early breastfeeding initiation.^[2] Without exclusive breastfeeding, infants become more susceptible to disease and increase the risk of infant death.^[3] Based on data in 2019, the condition with the most significant contributor to death in children aged 29 days–11 months was infectious. Pneumonia and diarrhea are still the main problems that have caused 979 deaths due to pneumonia and 746 deaths due to diarrhea. Meanwhile, based on 2018 data, 17.1% of toddlers aged 0–23 months were stunted, and 12.8% were very short toddlers. This percentage increased by 13.2% for short toddlers and 6.9% for very short toddlers from the previous year.^[4] One of the factors that cause pneumonia, diarrhea, and high stunting

in Indonesia is nonexclusive breastfeeding.^[5,6,7] Breast milk can protect infants from diarrheal diseases, pneumonia, and stunting and reduce the risk of obesity in children and also reduce the risk of chronic diseases.^[8]

World Breastfeeding Week in 2012 stated that of all babies in the world, only 32.6% of a total of 136.7 million babies received exclusive breastfeeding at the age of 0–6 months. This can illustrate that the coverage of exclusive breastfeeding is still <80% due to the lack of mothers who give exclusive breastfeeding to babies.^[9] Forty-one percent of babies worldwide who are exclusively breastfed are infants <6 months old. This

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figure is far from the world target in 2030, which is 70% of babies get exclusive breastfeeding. Meanwhile, the percentage of mothers who breastfeed their babies from 1 year to 2 years has decreased to 45%. The WHO target in 2030 is that 80% of infants worldwide aged 0–1 year are exclusively breastfed, and 60% of infants worldwide aged 0–2 years are exclusively breastfeeding. Based on data from the World Breastfeeding Trends Initiative in 2012, Indonesia is ranked 49th out of 51 countries in the Exclusive Breastfeeding category.^[10]

The percentage of infants aged 0–6 months in Indonesia who received exclusive breastfeeding in 2015 was 55.7%.^[11] In 2016, the rate of infants aged 0–6 months who received exclusive breastfeeding was 54%.^[12] In 2017, the rate of infants aged 0–6 months who were exclusively breastfed was 61.33%, and in 2018, infants who exclusively breastfed were 68.74%.^[13,14] Meanwhile, in 2019, babies aged 0 up to 6 months who received exclusive breastfeeding were 67.74%. There was an increase from 2016 to 2017, including in 2017–2018, although the increase was not too significant. However, there was a decline from 2015 to 2016, including 2018–2019. From 2015 to 2019, the coverage of exclusive breastfeeding for infants aged 0–6 months in Indonesia still did not meet the strategic plan target, namely the coverage percentage of 69%.^[15]

Two factors can affect exclusive breastfeeding: maternal factors consisting of knowledge, psychology, education, contraception, and breast anatomy.^[16,17] The next influencing factor is environmental factors which consist of the husband's support and support from health workers.^[18] Based on these factors, one of the factors that can affect exclusive breastfeeding is contraceptive use (odds ratio [OR] = 10,500).^[19] Breastfeeding mothers should pay attention to the use of contraceptives because improper use can reduce milk supply. Hence, the baby does not get enough breast milk. Several studies have stated a correlation between the use of contraception with a decrease in the volume and the duration of breast milk which affects the adequacy of exclusive breastfeeding.^[20,21]

This study uses data obtained from the 2017 Indonesian Demographic and Health Survey (IDHS). This study uses secondary data. The data used include the use of contraceptives and exclusive breastfeeding with the target of all women of childbearing age in Indonesia who have children aged 0–6 months. This study also examines contraception without separating by type of contraception. This has not been found in previous studies. Based on this explanation, researchers are interested in exploring the correlation between contraception and exclusive breastfeeding in Indonesia through research.

LITERATURE REVIEW

Based on Figure 1, it can be seen that the factors that influence exclusive breastfeeding for infants are divided into two factors, namely maternal factors and environmental factors. Maternal factors that influence exclusive breastfeeding are knowledge, psychology, education, contraceptive use, and anatomy of the mother's breast. Meanwhile, environmental factors that

influence exclusive breastfeeding are husband's support and health care workers' support.^[22]

RESEARCH METHODOLOGY

The research design in this study used descriptive-analytic with a cross-sectional approach. This study used secondary data taken from data from the 2017 IDHS. The population in this study was all women of childbearing age who were married and had their last child aged 0–6 months. The number of samples in this study was 1891 women of childbearing age obtained using the total sampling technique. The data analysis of this research used univariate and bivariate analysis. Univariate analysis was conducted to determine the distribution of frequency and percentage by performing descriptive statistical tests. Meanwhile, the bivariate analysis uses the Chi-square statistical test, which determines the correlation and the magnitude of the influence between variables.

FINDING AND DISCUSSION

Results

Univariate analysis

Age

Table 1 describes the description of the characteristics of the respondents in this study based on age with classification based on the 2017 IDHS.

Based on Table 1, it can be concluded that most of the respondents in this study were aged 25–29 years, namely 528 people (27.9%) of 1891 respondents.

Province

Table 2 describes this study's respondents' characteristics based on the province of residence with the local classification based on the 2017 IDHS.

Based on Table 2, it can be concluded that most of the respondents in this study resided in the province of West Java, namely 173 people (9.1%) out of 1891 respondents.

Latest education

Table 3 describes the characteristics of respondents in this study based on their latest education with the classification based on the 2017 IDHS.

Table 1: Frequency distribution of respondents' age

Age	Frequency (%)
15-19	128 (6.8)
20-24	386 (20.4)
25-29	528 (27.9)
30-34	472 (25)
35-39	282 (14.9)
40-44	87 (4.6)
45-49	8 (0.4)
Total	1891 (100)

Table 2: Frequency distribution of respondent provinces

Province	Frequency (%)
North Sumatra	111 (5.9)
Aceh	118 (6.2)
Riau	39 (2.1)
West Sumatra	45 (2.4)
Jambi	28 (1.5)
South Sumatra	44 (2.3)
Bengkulu	27 (1.4)
Lampung	42 (2.2)
Bangka Belitung	29 (1.5)
Riau Islands	31 (1.6)
Jakarta	49 (2.6)
West Java	173 (9.1)
Central Java	115 (6.1)
Yogyakarta	14 (0.7)
East Java	115 (6.1)
Banten	64 (3.4)
Bali	22 (1.2)
East Nusa Tenggara	114 (6)
West Nusa Tenggara	49 (2.6)
South Kalimantan	23 (1.2)
East Kalimantan	40 (2.1)
Central Kalimantan	21 (1.1)
North Kalimantan	34 (1.8)
West Kalimantan	42 (2.2)
North Sulawesi	10 (0.5)
South Sulawesi	70 (3.7)
Central Sulawesi	57 (3)
Gorontalo	20 (1.1)
Southeast Sulawesi	84 (4.4)
West Sulawesi	64 (3.4)
Maluku	95 (5)
North Maluku	45 (2.4)
West Papua	22 (1.2)
Papua	35 (1.9)
Total	1891 (100)

Table 3: Frequency distribution of respondents' last education

Last education	Frequency (%)
No education	26 (1.4)
Primary school	439 (23.2)
Secondary school	1057 (55.9)
Higher	369 (19.5)
Total	1891 (100)

Based on Table 3, it can be concluded that the last education of the respondents in this study was mostly secondary school, namely 1057 people (55.9%) of 1891 respondents.

Baby's age

Table 4 describes the description of the characteristics of the respondents in this study based on the baby's age with the classification of the baby's age based on the 2017 IDHS.

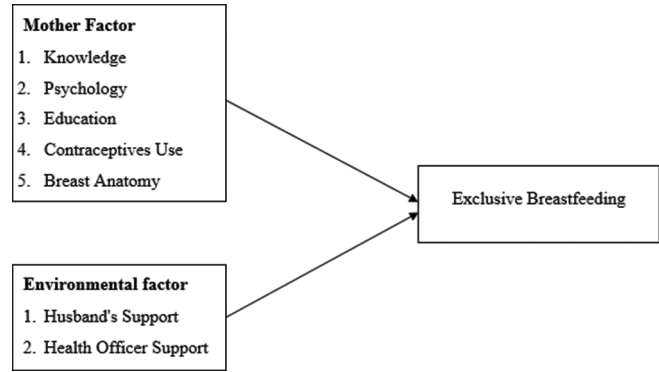


Figure 1: Theoretical framework. Source: Dewi and Sunarsih, 2012; Marmi, 2012; and Haryono and Setianingsih, 2014

Based on Table 4, it can be concluded that the age of the infants in this study had almost equal percentages, the most percentage being infants aged 4 months, namely 320 infants (16.9%) of 1891 infants.

Contraception types

Table 5 describes the characteristics of respondents in this study based on the type of contraception used by respondents with the classification of contraception types based on Rofikoh *et al.* (2019).^[23]

Based on Table 5, it can be concluded that most of the respondents in this study used hormonal contraceptives, namely 740 people or 74% of the 1003 respondents who used contraception.

Contraception methods

Table 6 describes the characteristics of respondents in this study based on the contraception methods used by respondents with the classification of contraception methods based on the 2017 IDHS.

Based on Table 6, it can be concluded that most of the respondents in this study used injection contraceptives, namely 605 people or 60% of the 1003 respondents who used contraception.

Contraception use

Table 7 describes the description of contraception use in the respondents of this study with the classification of contraception use based on the 2017 IDHS.

Based on Table 7, it can be concluded that in this study, most of the respondents used contraception, namely 1003 people (53%). Meanwhile, respondents who did not use contraception were 888 people (47%).

Exclusive breastfeeding

The description of exclusive breastfeeding in the respondents of this study is described in Table 8 of the frequency distribution of exclusive breastfeeding. Exclusive breastfeeding category classification based on research conducted by Erlani *et al.* (2020).^[24]

Based on Table 8, it can be concluded that most of the respondents in this study did not provide exclusive

Table 4: Frequency distribution of respondents' infant age

Age (month)	Frequency (%)
0	119 (6.3)
1	296 (15.7)
2	295 (15.6)
3	310 (16.4)
4	320 (16.9)
5	293 (15.5)
6	258 (13.6)
Total	1891 (100)

Table 5: Frequency distribution of respondents' contraception types

Contraception types	Frequency (%)
Hormonal contraception	740 (74)
Nonhormonal contraception	263 (26)
Total	1003 (100)

Table 6: Frequency distribution of respondents' contraception methods

Contraception methods	Frequency (%)
Pill	85 (8)
IUD	37 (4)
Injection	605 (60)
Male condom	42 (4)
Female sterilization	78 (8)
Periodic abstinence/calendar	18 (2)
Withdrawal	57 (6)
Other traditional methods	4 (0)
Implant	50 (5)
Lactational amenorrhea method	26 (3)
Other modern methods	1 (0)
Total	1003 (100)

IUD: Intrauterine Device

Table 7: Distribution of frequency of use of contraception

Contraception use	Frequency (%)
Using contraception	1003 (53)
Not using contraception	888 (47)
Total	1891 (100)

Table 8: Distribution of exclusive breastfeeding frequency

Exclusive breastfeeding	Frequency (%)
Exclusive breastfeeding	870 (46)
Nonexclusive breastfeeding	1021 (54)
Total	1891 (100)

breastfeeding to their babies, namely 1021 people (54%). Meanwhile, respondents who gave exclusive breastfeeding to their babies were 870 people (46%).

Bivariate analysis

Bivariate analysis in this study analyzes the dependent variable, namely exclusive breastfeeding, with the independent variable, namely contraceptive use. Table 9 describes the results of the bivariate analysis in this study.

Based on Table 9, it can be concluded that as many as 605 (60.3%) women of childbearing age use contraception and do not provide exclusive breastfeeding to their babies. Meanwhile, women of childbearing age who use contraception and provide exclusive breastfeeding are 398 people (39.7%). In addition, Table 9 shows the results of the OR calculation, known that the OR value is 0.58. Thus, it said that women of childbearing age who use contraception tend to give exclusive breastfeeding to their babies by 0.58 times greater than those who do not use contraception. Meanwhile, the results of the Chi-square analysis show that the P value of the research results is 0.000 ($P < 0.05$). Thus, it can explain that there is a correlation between contraceptive use and exclusive breastfeeding in Indonesia.

Discussion

Contraceptive use in Indonesia in 2017

Several factors can influence contraceptive use. Factors that can affect the use of contraception are age, number of children or parity, religion, and public knowledge. The first factor is age; the older a person is, the more a person's desire to not get pregnant again increases.^[25] The second factor is the number of children or parity; the number of children in each family must be considered because the more children, the greater life needs. The more frequent childbirth will make the mother's health more vulnerable.^[26] The third factor is religion; some religions oppose contraception and argue that contraception is against God's will.^[27] Redang *et al.* stated that one of the reasons why couples of childbearing age (PUS) did not use contraception was religious regulations.^[28] The last factor is public knowledge; lack of knowledge about contraception causes a person not to use contraception.^[29]

Based on the statement above, it can conclude that the factors that can influence a person in using or not using contraception include a person's age, number of children, religion, and public knowledge.

Exclusive breastfeeding in Indonesia in 2017

Several factors can affect exclusive breastfeeding, including mother's knowledge, mother's psychology, mother's education, use of contraception/KB, mother's breast anatomy, husband's support, and support from health workers. A mother's knowledge is the first factor that can affect exclusive breastfeeding for babies. Septiani *et al.* stated that mothers with good knowledge could provide exclusive breastfeeding compared to mothers with sufficient knowledge. The second factor is maternal psychology; maternal psychological conditions such as peace of mind and mind affect the adequacy and smoothness of breastfeeding.^[30] The third factor is education, a mother's education can affect exclusive

Table 9: Correlation between contraceptive use and exclusive breastfeeding

Contraception use	Exclusive breastfeeding		Total, <i>n</i> (%)	OR	<i>P</i>
	Exclusive breastfeeding, <i>n</i> (%)	Nonexclusive breastfeeding, <i>n</i> (%)			
Using contraception	398 (39.7)	605 (60.3)	1003 (100)	0.58	0.000
Not using contraception	472 (53.2)	416 (46.8)	888 (100)		

OR: Odds ratio

breastfeeding. Nasution *et al.* (2016) stated that mothers with low education tend not to give exclusive breastfeeding to their babies, compared to mothers with higher education.

The fourth factor, namely the use of contraception, Yuliasari (2015) and Bingan (2019) stated a correlation between contraceptive use and a decrease in the volume and duration of breast milk which affected the adequacy of exclusive breastfeeding. The fifth factor was the anatomy of the mother's breast. The number of lobes, anatomical papillae, or nipples of the mother's breast can affect milk production, making exclusive breastfeeding inhibition. Thus, mothers should breastfeed their babies as often as possible to avoid breast engorgement. The sixth factor is support from husbands. Nasution *et al.* revealed that mothers with husband support are less likely to give nonexclusive breastfeeding to their babies than mothers who receive support from their husbands. The last factor is support from health workers. Sadiman *et al.* stated that the support of health workers to breastfeeding mothers significantly affects exclusive breastfeeding to infants.^[31]

Based on these statements, it can conclude that exclusive breastfeeding can be influenced by several factors, including knowledge, psychological condition, mother's education, contraceptive use, maternal breast anatomy, support from husbands, and support from health workers to mothers. Some of these factors can affect the adequacy and smoothness of breast milk.

Correlation between Contraceptive Use and Exclusive Breastfeeding in Indonesia in 2017

This research is in line with another research conducted by Dewi (2019); namely, there is a correlation between the use of contraception and the smooth production of breast milk. Results of this study are also in line with other studies which state that there is a correlation between the use of contraceptives and milk production.^[32] Permatasari (2018) states a correlation between the use of hormonal contraception and milk production in breastfeeding mothers.^[33] The use of contraception is related to the smooth production of breast milk. Contraceptives such as intrauterine devices (IUDs) and traditional methods will not interfere with breast milk production. Meanwhile, contraception such as injections, pills, and implants can cause milk production to be not smooth.

Inappropriate use of contraception can lead to a lack of milk supply and the baby not getting enough milk. As many as 80% of respondents who use inappropriate contraceptives have the

adequacy of breast milk, which is not enough. Inappropriate use of contraception includes the use of combined contraceptives containing estrogen and progestin, which can cause a decrease in the duration and volume of breast milk.^[34] Estrogen levels can suppress FSH so that it stimulates the anterior pituitary lobe to secrete a luteinizing hormone, which causes the hypothalamus to release dopamine, a prolactin inhibitory factor. Dopamine can cause the breasts to not produce milk because dopamine decreases prolactin secretion by up to ten times.^[35] If the contraceptive only contains the hormone progestin, then the user will not affect the duration or volume of breast milk. Mothers who use combination contraception have a shorter duration of breastfeeding compared to nonhormonal contraception.^[36]

Based on some studies above, it can be concluded that there is a correlation between the use of contraception and exclusive breastfeeding. Many women of childbearing age in this study used contraception but did not give exclusive breastfeeding to their babies. Nonexclusive breastfeeding can be caused by improper use of contraception. Inappropriate use of contraception can cause breastfeeding to be not smooth. Contraceptives that can cause breastfeeding are not smooth, namely contraception in which there are the hormones estrogen and progestin. Examples of contraception include pills, injections, and implants. Meanwhile, women of childbearing age who can provide exclusive breastfeeding to their babies use contraception that does not contain estrogen and progestin, such as the IUD or traditional methods.

CONCLUSION AND FURTHER RESEARCH

Conclusion

Based on the study results, it can be concluded that there is a correlation between contraceptive use and exclusive breastfeeding in Indonesia in 2017.

Suggestion

For the community

The results of this study can be used as information and recommendations for the community in the use of contraception during exclusive breastfeeding for infants aged 0–6 months. Mothers who are breastfeeding should use contraception that does not contain estrogen and progestin, such as IUDs and traditional methods. Breastfeeding mothers should avoid contraception containing estrogen and progestin such as pills, injections, and implants; these contraceptives cannot cause breast milk to become uneven.

For the government

The government is expected to be able to provide information to the public about contraception that can cause breast milk to not run smoothly for the community, especially mothers of childbearing age who give exclusive breastfeeding to babies aged 0 to 6 months. Socialization can be done by distributing leaflets about contraception that may or may not be used by breastfeeding mothers and disseminated by Integrated Healthcare Center.

For further researchers

This research can be used as a reference or reference for further researchers in continuing this research using other variables not examined by the researchers in this study.

Limitation

The limitation of this research is that the data used are secondary data contained in the 2017 IDHS. If there are other factors, it cannot be measured.

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Conflicts of interest

There are no conflicts of interest.

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