

Exclusive Breastfeeding Intention among Pregnant Women

Intensi Pemberian ASI Eksklusif pada Ibu Hamil

Tria Astika Endah Permatasari*, Ratu Ayu Dewi Sartika**, Endang Laksmningsih Achadi**, Urip Purwono***, Anies Irawati****, Dwiana Ocviyanti*****, Evi Martha**

*Department of Nutrition, Faculty of Medicine and Health, University of Muhammadiyah Jakarta, Tangerang Selatan, Indonesia, **Faculty of Public Health, Universitas Indonesia, Depok, Indonesia, ***Faculty of Psychology, Universitas Padjajaran, Bandung, Indonesia, ****Research and Development Center of Public Health Effort, Ministry of Health, Jakarta, Indonesia, *****Faculty of Medicine, Universitas Indonesia, Jakarta, Indonesia

Abstract

Exclusive breastfeeding intention is a mother's intention to provide her baby only breast milk since the infant was born until at the age of 6 months. Intention in prenatal period is the direct affirmation of exclusive breastfeeding. This study aimed to find out the most dominant factor related to exclusive breastfeeding intention among pregnant women at a mother and child hospital in South Tangerang. A cross-sectional study design was conducted primarily. The samples were 143 pregnant women on their third trimester pregnancy selected by purposive sampling. Intention was measured by the Infant Feeding Intention scale questionnaire. Meanwhile, attitude, subjective norms, and perceived behavioral control were measured by the modified Breastfeeding Attrition Prediction Tool questionnaire. Data were analyzed using the multivariate logistic regression analysis. It was 61.5% mother had strong exclusive breastfeeding intention. Perceived behavioral control dominantly influenced the exclusive breastfeeding intention (p value = 0.007; Odds Ratio 3.030; 95% CI = 1.361-6.746). The other factors influencing intention were attitude, exposure to exclusive breastfeeding from social media, health workers' support, previous breastfeeding experience and mothers' occupation. A mother with high perceived behavioral control has three times more likely to have 'high exclusive breastfeeding intention' than those having the low ones.

Keywords: Exclusive breastfeeding, perceived behavioral control, pregnant women

Abstrak

Intensi pemberian ASI eksklusif adalah intensi ibu untuk memberikan hanya ASI pada bayinya sejak dilahirkan hingga berusia enam bulan. Intensi pada periode prenatal merupakan penentu langsung pemberian ASI eksklusif. Penelitian ini bertujuan mengetahui faktor paling dominan berhubungan dengan intensi pemberian ASI eksklusif pada ibu hamil di sebuah rumah sakit ibu dan anak di Kota Tangerang Selatan. Penelitian dengan desain studi potong lintang dilakukan secara primer. Sampel berjumlah 143 ibu hamil trimester ketiga dipilih secara *purposive sampling*. Intensi pemberian ASI eksklusif diukur menggunakan kuesioner *the Infant Feeding Intentions scale*. Sedangkan sikap, norma subjektif dan persepsi kontrol perilaku dinilai menggunakan modifikasi kuesioner *Breastfeeding Attrition Prediction Tool*. Data dianalisis menggunakan analisis regresi logistik ganda. Sebanyak 61,5% ibu memiliki intensi kuat memberikan ASI eksklusif. Persepsi kontrol perilaku paling dominan berhubungan dengan intensi pemberian ASI eksklusif, ($p=0,007$; Odds Ratio 3,030; 95% CI 1,361-6,746). Faktor lainnya yang berhubungan dengan intensi adalah sikap, keterpaparan ibu terhadap ASI eksklusif dari media sosial, dukungan tenaga kesehatan, pengalaman menyusui sebelumnya, dan pekerjaan ibu dengan persepsi kontrol perilaku tinggi berpeluang tiga kali lebih besar memiliki 'intensitas tinggi' untuk memberikan ASI eksklusif dibandingkan ibu berpersepsi kontrol perilaku rendah.

Kata kunci: ASI eksklusif, persepsi kontrol perilaku, ibu hamil

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Correspondence: Tria Astika Endah Permatasari, Faculty of Medicine and Health University of Muhammadiyah Jakarta, KH Ahmad Dahlan Street, Ciputat, Tangerang Selatan, Phone: +6221-7492135, E-mail: astika.tria@gmail.com

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Introduction

Breastfeeding is a natural process. The effectiveness of exclusive breastfeeding since the infant was born until the age of 6 months has direct influence with intention. Meanwhile, the exclusive breastfeeding intention can be predicted through the attitude, subjective norms and perceived control behavior according to the Theory of Planned Behavior.¹ The high intention or mother's will to provide exclusive breastfeeding in prenatal period is proven to contribute to significant effect on the effectiveness of exclusive breastfeeding.¹⁻³

World Health Organization (WHO) recommends exclusive breastfeeding for optimum growth, development and infant's health. It is supported by the increase of scientific study about the benefit of exclusive breastfeeding.⁴⁻⁶ Skin-to-skin contact during breastfeeding also has a role on the development of infant's Intelligence Quotient and Emotional Intelligence.⁷ Even though exclusive breastfeeding becomes a global health recommendation, but it only covers around 40% in the world.⁸ In 2014, Center of Disease Control and Prevention reported that 80% of infants born in the United States did not get exclusive breastfeeding.⁹ Longitudinal study in 2015 in Jiangyou, China also showed that 39% of 695 mothers stopped breastfeeding their infants before the age of 6 months.¹⁰

The exclusive breastfeeding coverage was increasing in several countries, but it decreased in other countries. In Indonesia, based on Indonesia Health Profile Data, the provincial coverage for exclusive breastfeeding decreased from 54.3% to 52.3% in 2013-2014, and increased to 55.7% in 2015.¹¹ One of the provinces with exclusive breastfeeding exceeding the national coverage is Banten Province (65.8%), however, its coverage is lower than Special Capital Region of Jakarta at 67.1%. In general, the coverage of exclusive breastfeeding in Indonesia is still lower than the national target (80%).¹¹

The coverage of exclusive breastfeeding remains low in several areas. Rosha and Utami,¹² reported that 44% of mothers in Bogor, West Java in 2013 provided prelacteal foods to infants when breastmilk did not come out and failed to provide exclusive breastfeeding. A similar study in Subang showed that as much as 38.6% of mothers providing exclusive breastfeeding.¹³ Amran and Amran,¹⁴ in 2012 also reported that of 401 mothers in South Tangerang City, there were 43.6% of mothers providing exclusive breastfeeding.

Based on Health Profile of Banten Province, the coverage of exclusive breastfeeding in South Tangerang City increased from 16.1% in 2011 to 49.2% in 2012.¹⁵ However, its coverage is fluctuating because South Tangerang City is an urban and industrial area where most of the population are migrants and employed.

Mothers generally have antenatal care in health facilities, especially in a mother and child hospital.¹⁵

The low coverage of exclusive breastfeeding is directly affected by the weak mother's intention to provide exclusive breastfeeding since the pregnancy period.¹⁶⁻¹⁷ Intention is influenced by attitude, subjective norms and perceived behavioral control and controlled by covariate variables, such as education, occupation, parity, previous mother's breastfeeding experience, social support, and exclusive breastfeeding exposure from social media.^{3,18} In Indonesia, the study of exclusive breastfeeding intention still needs to be explored, especially using hospital-based sampling technique. Previous studies on intention also have not explained the method clearly yet, so it was difficult to be replicated widely.^{19,20} The purpose of this study was to find out the dominant factor related to the exclusive breastfeeding intention among pregnant woman.

Method

A cross-sectional study design was conducted on the population of pregnant mothers having antenatal care in a mother and child hospital, in South Tangerang City in September-November 2016. Based on Hypothesis Test for a Population Proportion with two-sided test approach, a minimum sample of 130 pregnant women on their third trimester pregnancy, which is calculated based on the population proportion of the previous study, was required by purposive sampling technique. An additional of 10% sample was added to anticipate drop-out. The total sample of 143 pregnant women was then selected for this study.

Women included in the study were those who regularly attended antenatal care (at least twice); those who were in their last trimester of pregnancy, when the intention had already strongly formed; those who were at least 18 years of age who were physically and mentally ready for pregnancy.¹⁸ Those willing to participate filled out the questionnaire and agreed to sign informed consent. Mothers who were free of any serious health conditions during pregnancy that can complicate the breastfeeding process were excluded.

Intention as dependent variable was measured by adapting original questionnaire of the Infant Feeding Intention (IFI) scale which was first developed by Nommsen-Rivers in prenatal clinic of University of California.²¹ It had been valid and reliable in different culture adaptation.²² The IFI questionnaire was adapted (questionnaire use permit, forward and back translation process, panel of lactation expert, panelist readability, and validity and reliability test. It was used after proven valid dan reliable (corrected item-total correlation was between 0.328–0.398 and Cronbach Alpha 0.713).

The IFI questionnaire consisted of five items about mother's plan that were to give her infant only formula milk feed her baby; to breastfeed her baby; to breastfeed without using any formula/other milk when the infant is one month old; to breastfeed without using any formula/other milk when baby is three months old, and to breastfeed without using any formula/other milk when baby is six-months-old. This questionnaire assessed on five points Likert scale (anchor: 'very much agree' to 'very much disagree'). This assessment applied inversely to items 2,3,4 and 5. Total intention score was calculated using formula: addition of (mean score of item 1+2) + (total score of item 3,4, and 5). Thus the total score had the range of 0 (strong intention to not breastfeeding at all) until 16 (the strong intention to provide breastfeeding as the only source of food for infants in the first 6 months).²¹ The score was categorized based on the mean score that were 'low intention' if the score less than mean, and 'high intention' if the score greater than equal to mean.

The independent variables were attitude, subjective norms and perceived behavioral control as intention-based predictor.²³ These three variables were measured by modified Breastfeeding Attrition Prediction Tool (BAPT), which was first developed by Janke, assessed six point Likert scale.²⁴ It has been adapted in several countries.^{1,3,25} The modified BAPT consisted of 56 items (30 items of attitude, 16 items subjective norms, and 10 items perceived behavioral control) with internal consistency range from 0.78 to 0.86.

Attitude to breastfeeding (30 items consisting of 16 positive items and 14 negative items) consist of two factors that were mother's positive or negative judgment of breastfeeding, and evaluation of the outcomes of it for them and their infants. For example, the positive question '*Breastmilk is more nutritious than infant formula milk*'; negative question '*Breastfeeding is painful*'.²⁴⁻²⁵ The mothers were asked to rate on a 6-point Likert scale. All scores were summed and categorized by median, namely 'negative attitude' if the score of attitude was less than median, and 'positive attitude' if the score greater than equal to median. Subjective norms (16 items) depended on mother's perception of the significant others' judgment of breastfeeding and if they care about their opinions, for example, the question: '*The baby's father thinks I should...*' and assessed on another 6-point Likert scale (anchors: important to unimportant). All scores were summed and categorized into 'low subjective norms', if the score was less than mean, and 'high subjective norms' if the score was greater than equal to mean. Perceived behavioral control is women's perception of the degree of ease or difficulty of breastfeeding (10 items). It was built from information, skills, abilities, feelings, dan dependence on others, for example, the question '*I am physical-*

ly able to breastfeed'. Then it was assessed on a 6-point Likert scale (anchors: strongly agree to strongly disagree). All scores were summed and categorized into 'low perceived behavioral control' if the score was less than median, and 'high perceived behavioral control' if the score was greater or equal than median.

The control variables were age, education, occupation, parity, previous breastfeeding experience, exposure to formula milk advertising, exposure to exclusive breastfeeding from mass media and social media, and social support measured by a structured questionnaire. Exposure to formula milk advertising came from mass media/social media/health workers/family/peer/religious or community leaders/other).¹⁷ This variable was categorized into 'low exposure' if the mother got exposure to formula milk advertising less than three times per week from one source of information, and high exposure if the mother got exposure to formula milk advertising greater than or equal to less than three times per week at least from one source of information exposure.

Exposure to exclusive breastfeeding from mass media was the exposure to exclusive breastfeeding information print media/the internet/electronic media, etc. This variable was categorized into 'low exposure' if the mother get exposure of exclusive breastfeeding less than three times per week from one source of information, and 'high exposure' if the mother got exposure to exclusive breastfeeding greater than or equal than three times per week at least from one source of information exposure.²⁶ Exposure to exclusive breastfeeding from social media was the exposure of mother to information about exclusive breastfeeding from social media (BBM/facebook/twitter/whatsapp/instagram/others).¹⁷ This variable was categorized into low exposure if the mother obtained information on exclusive breastfeeding not everyday from one social media source, and high exposure if the mother got information on exclusive breastfeeding every day at least from one social media source.

Family support was all forms of support to provide exclusive breastfeeding from the husband/parents/in-laws/siblings/other family members.¹⁷ Peer support was all forms of support provided by mother's peer, such as motivation, sharing breastfeeding experience, etc. Health workers' supports was all efforts provided by midwife/nurse/doctor/obstetrician/nutrition educator/others to support for exclusive breastfeeding such as motivation, counseling, mentoring, home visit, not promoting formula milk, etc. The calculation of each variable (family/peer/health workers) was similar, in which each variable was summed and categorized into 'less supported' if the score less than median, and 'Supported' if the score greater than equal to median.²⁶ Data was analyzed using multivariate logistic regression

analysis.

This study has passed the ethical clearance test based on the letter of notification of Research Ethics, Faculty of Public Health, Universitas Indonesia (188/UN2.F10/PPM.00.02/2016). Data collection was conducted primarily by the researcher and assisted by three enumerators (graduates of Public Health Nutrition). Mothers filled the questionnaire by themselves after getting information about the research and signed the informed consent.

Results

Table 1 shows that mothers with 'high intention' to breastfeed since the third trimester pregnancy were 61.5% (mean score of intention in this study was 11.0 ± 2.5 SD). From this figure (61.5%), as much as 6.7% intended to provide exclusive breastfeeding until their infants aged 1 month, 19.5% mothers intended to breastfeed exclusively until their infants were at the age of 2 months, and 73.8% intended to provide exclusive breastfeeding (until the age of 6 months).

Mothers with 'positive attitude toward exclusive breastfeeding' were 59.4% (Table 1). From this figure, most mothers agreed that 'breast milk is more nutritious

than infant formula milk' and 'breastfeeding makes mother closer to her infant', while the mothers with 'negative attitudes toward breastfeeding' was 40.6%. Mothers agreed that 'breastfeeding is painful' and 'breastfeeding is more time consuming than formula milk feeding'.

The mothers with 'high subjective norms' were 50.3%. Mothers judged their social environment want them to breastfeed. Most mothers answered that their family wanted them to breastfeed mostly. Mothers with 'high perceived behavioral' were 54.5%. From this figure, mothers with 'high perceived behavioral' control agreed that they 'physically able to breastfeed' (85.9%). of 65 mothers (45.5%) who had 'low perceived behavioral control', as much as 78.4% mothers argued that they will not have sufficient milk for their infants.

Mothers aged would older than 30 years were 60.8%, then 78.3% high educated, 58.0% employed, 41.3% primiparous and 43.4% did not have previous breastfeeding experience. Mothers who got exposure to formula milk advertising during pregnancy were 46.2%, then 70.6% got exposure to exclusive breastfeeding information from mass media, and 72.7% got information from social media. Mothers who got support from their

Table 1. Bivariate Analysis

Variable	Category	Frequency	%	p Value
Exclusive breastfeeding intention	Low	55	38.5	
	High	88	61.5	
Attitude	Negative	58	40.6	0.050
	Positive	85	59.4	
Subjective norms	Low	71	49.7	0.150*
	High	72	50.3	
Perceived behavioral control	Low	65	45.5	0.002*
	High	78	54.5	
Age	< 30 years old	87	60.8	0.850
	≥ 30 years old	56	39.2	
Education	Non Higher Education	31	21.7	0.700
	Higher Education	112	78.3	
Occupation	Employed	83	58.0	0.050*
	Unemployed	60	42.0	
Parity	Primipara	59	41.3	0.348
	Multipara	84	58.7	
Previous breastfeeding experience	No	62	43.4	0.013*
	Yes	81	56.6	
Exposure to formula advertising	Less exposure	77	53.8	0.367
	High exposure	66	46.2	
Exposure to exclusive breastfeeding from mass media	Less exposure	42	29.4	0.954
	High exposure	101	70.6	
Exposure to Exclusive breastfeeding from social media	Less exposure	39	27.3	0.123*
	High exposure	104	72.7	
Family support	Less Supported	25	17.5	0.047*
	Supported	118	82.5	
Peer support	Less Supported	43	30.1	0.178*
	Supported	100	69.9	
Health workers' support	Less Supported	54	37.8	0.050*
	Supported	89	62.2	

Notes:

*eligible for multivariate analysis

Table 2. Multiple Regression Logistic

Variabel	p Value	OR	95% CI
Perceived behavioral control	0.007	3.030	1.361-6.746
Exposure to exclusive breastfeeding form social media	0.030	2.702	1.102-6.625
Attitude	0.031	2.585	1.093-6.112
Health workers' support	0.029	2.472	1.095-5.583
Previous breastfeeding experience	0.040	2.342	1.039-5.280
Occupation	0.030	2.495	1.091 – 5.707
Constants	0.000	0.000	

Notes:
OR = Odds Ratio, CI= Confidence Interval

family for providing exclusive breastfeed were 82.5%, while 69.9% got from their peer, and 62.2% got from health workers (Table 1).

Table 1 presents that attitude, subjective norms, perceived behavioral control, occupation, parity, exposure to exclusive breastfeeding from social media, social support (family, peer and health workers) passed in candidate selection for multivariate analysis (p value < 0.25). Perceived behavioral control was the most dominant variable related to exclusive breastfeeding intention (p value = 0.007; odds ratio = 3.030; 95% CI = 1,361-6,746). A mother with ‘high perceived control behavior’ had three times more likely to have high exclusive breastfeeding intention than those having the low ones (Tabel 2).

Discussion

Exclusive breastfeeding intention is defined as mother’s will in breastfeeding exclusively until the age of 6 months.²⁵⁻²⁷ In this study, as much as 61.5% mothers had ‘high exclusive breastfeeding intention’. This figure is lower than a previous local study in North Barito, Central Kalimantan, Indonesia that shows 70% mothers have ‘high intention’, because mother who attend the pregnant class are those who had good knowledge of breastfeeding generally.¹⁹ However, in Beirut, Lebanon, there were 87.1% mothers who had ‘high exclusive breastfeeding intention’. Majority of mothers (62.1%) are also unemployed, and have higher socioeconomic compared to this study.¹⁶ The different results are shown by the study in Hong Kong. There were 53.9% mothers who had ‘high exclusive breastfeeding intention’. As much as 26% of mothers in Hong Kong do not have planning for pregnancy. A mother’s decision to breastfeed may be affected if the stress of pregnancy engenders conscious or unconscious negative feelings toward the unborn child.²⁷

In the study, perceived behavioral control was the most dominant variable related to exclusive breastfeeding intention. Mothers with ‘high perceived behavioral con-

trol’ were three times more likely to have ‘high intention’ to breastfeed than those having the low ones. Similar to Kafulafula’s,¹ study in Malawi, mothers with had ‘high perceived behavioral control’ were three times more likely to have high exclusive breastfeeding intention than those with the low intention.¹ Mothers intend to breastfeed exclusively when they believe they can breastfeed without difficulty, such as physically able to breastfeed, know how to breastfeed, emotionally ready to breastfeed, suggest that breastfeeding is easy, feel confident to breastfeed, believe that they will have sufficient milk for their infants.^{3,24} This study is supported by a previous study in Tegal City, Central Java, Indonesia, which reported that the mother’s perception in sufficient milk supply is the main variable which form intention and related to the success of exclusive breastfeeding.²⁸

Attitude to breastfeeding was also associated with exclusive breastfeeding intention significantly (p value < 0.05). Mothers who evaluated exclusive breastfeeding positively had 2.6 times more likely to have ‘high exclusive breastfeeding intention’ than those with the low intention. Study in Bangladesh in 2011 on 2,400 mothers proved that positive attitude correlated significantly to exclusive breastfeeding intention.²⁹ The mothers with had positive attitude to breastfeeding had positive judgment on exclusive breastfeeding and negative judgment about formula milk (for example, the mothers agreed with positive items ‘breastfeeding is more convenient than formula feeding’, or ‘formula milk-fed infants tend to get sick’).^{3,24,25}

Mothers exposed to exclusive breastfeeding information from social media were 2.7 times more likely to have ‘high exclusive breastfeeding intention’ than those with the low intention. Of 72.7% mothers exposed to information from social media, almost 50% mothers had two or more kinds online social media platforms (most of them use whatsapp and instagram) on their android smartphone. Similar to study by Hauck’s,³⁰ in 2016, social media socially interactive in the community as well as online has meaningful correlation in increasing intention

and exclusive breastfeeding practice. Lifestyle changes mothers' social interaction pattern in receiving and actualizing the information to transfer knowledge and information using social media.¹⁷

In addition, health workers' support was also significantly associated with exclusive breastfeeding intention (p value < 0.05). The information provided by the health workers were considered credible by mothers.²⁸ As much as 50% mothers said they got support from obstetrician, 35% from midwives and the rest were from nurses and others health workers. Pregnant mothers gaining support from health workers had 2.5 times more likely to have exclusive breastfeeding intention than those who did not. This result is in line with the previous study which proved that health worker's support significantly related to intention which determined the effectiveness of exclusive breastfeeding.²⁹⁻³⁰

Mother had previous breastfeeding experience in this study tend to have exclusive breastfeeding intention twice higher than those who did not. Similar to study by Mortazavi, *et al.*,³ mothers who did not have a previous breastfeeding experience admitted that they were less-confident in exclusive breastfeeding than mothers who had breastfeeding experience. The study also proved that mothers who did not work had 2.5 times more likely to have 'high exclusive breastfeeding intention' than those working mothers. Most of working mothers (58%) admitted that they planned to combine breastfeeding with formula milk when they returned to work (after their babies was already aged 2 months). In general, the mothers in this study stated that they worried that they could not express breast milk at work, so that the infant would not obtain sufficient breast milk and nutritional intake unfulfilled. Lau, *et al.*,²⁷ in Hong Kong reported that mothers who did not work had 1.07 times more likely to have 'high exclusive breastfeeding intention' than working mothers. Working mothers were at risk to be stressful because of their job and it threatened the exclusive breastfeeding and its continuity.²⁶

Conclusion

More than half of the women in this study have 'high exclusive breastfeeding intention'. It can increase the exclusive breastfeeding coverage if mothers' intention can be applied in real behavior by exclusively breastfeeding the infant until the age of 6 months. The most dominant variable related to exclusive breastfeeding intention is perceived behavioral control. A mother with high perceived behavioral control has three times more likely to have high intention to exclusive breastfeeding than those with the low intention. Attitude to exclusive breastfeeding, exclusive breastfeeding exposure from social media, health worker's support, previous breastfeeding experience, and maternal occupation also associate with exclu-

sive breastfeeding intention.

Recommendation

Exclusive breastfeeding intention should be measured since the first trimester of pregnancy as early detection for the success of exclusive breastfeeding. Therefore, promotive and preventive efforts can be conducted early. Social marketing for exclusive breastfeeding which is conducted mainly by the health workers can be integrated with antenatal care service in the hospital (such as seminar, pregnant mother class, and lactation management training) and through social media. It also needs policies that support working mothers on exclusive breastfeeding. Furthermore, it is necessary to conduct longitudinal to prove that intention is predictor of exclusive breastfeeding by measuring intention since pregnancy until 6 months of exclusive breastfeeding period.

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