

FACTORS ASSOCIATED WITH EXCLUSIVE BREASTFEEDING AMONG MOTHER IN BANJARMASIN, SOUTH KALIMANTAN

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FAKTOR-FAKTOR YANG BERHUBUNGAN DENGAN ASI EKSKLUSIF PADA IBU DI BANJARMASIN, KALIMANTAN SELATAN

ABSTRACT

Background: Exclusive breastfeeding is recommended food for infants until the age of 6 months. After 6 months years old a complementary food is recommended until 2 years of age. However, percent of mothers practicing exclusive breastfeeding is still low. This study aimed to determine factors associated with exclusive breastfeeding among mothers in Banjarmasin, South Kalimantan.

Method: This was a case-control study conducted in Banjarmasin, South Kalimantan from June to December 2016. A sample of 258 lactating mothers, consisting of 136 mothers who exclusively breastfed (control group) and 122 mothers who did not exclusively breastfeed (case group), were selected for this study by purposive sampling. Data were collected by pre-tested questionnaire and interview. Data were analyzed by logistic regression.

Results: Low mother education (OR=1.34; 95% CI=1.18-1.82), low mother knowledge (OR=2.24; 95% CI=1.69-2.42), poor mother health condition (OR=1.34, 95% CI=0.08-3.93), and low family support (OR=2.06; 95% CI=0.02-8.93) were associated with decreased chance of exclusive breastfeeding. Mother age 20-29 years (OR=2.82; 95% CI=0.18-6.74) and housewife status (OR=2.54; 95% CI=1.00-8.29) were associated with increased chance of exclusive breastfeeding. Interview result showed that lack of mother knowledge on the utility of exclusive breastfeeding was a strong predictor for not practicing exclusive breastfeeding. Most of the mothers interviewed believed that providing food in addition to breastmilk could accelerate the growth of their children.

Conclusion: Lack of knowledge about benefits of exclusive breastfeeding was the dominant predictor factor and potentially inhibit exclusive breastfeeding. Promotion of exclusive breastfeeding should be improved by health workers to mothers so that they can understand the benefits of exclusive breastfeeding in children.

Keyword: Exclusive breastfeeding, family support, mother education, mother knowledge

ABSTRAK

Latar Belakang: Pemberian ASI eksklusif merupakan asupan yang direkomendasikan untuk bayi sampai usia 6 bulan. Setelah berusia 6 bulan, makanan tambahan direkomendasikan hingga usia 2 tahun. Namun, persentase ibu yang melakukan ASI eksklusif masih rendah. Penelitian ini bertujuan untuk mengetahui faktor-faktor yang berhubungan dengan pemberian ASI eksklusif pada ibu di Banjarmasin, Kalimantan Selatan.

Metode: Ini adalah studi kasus kontrol yang dilakukan di Banjarmasin, Kalimantan Selatan dari Juni hingga Desember 2016. Sampel terdiri dari 258 ibu menyusui, terdiri dari 136 ibu yang menyusui secara eksklusif (kelompok kontrol) dan 122 ibu yang tidak menyusui secara eksklusif (kelompok kasus), dipilih untuk penelitian ini dengan *purposive* sampling. Data dikumpulkan dengan kuesioner dan wawancara. Data dianalisis dengan regresi logistik.

Hasil Penelitian: Pendidikan ibu rendah (OR=1,34; 95% CI=1,18-1,82), pengetahuan ibu rendah (OR=2,24; 95% CI=1,69-2,42), kondisi kesehatan ibu yang buruk (OR=1,34, 95% CI=0,08-3,93), dan dukungan keluarga yang rendah (OR=2,06; 95% CI=0,02-8,93) dikaitkan dengan penurunan kesempatan pemberian ASI eksklusif. Usia ibu 20-29 tahun (OR=2,82; 95% CI=0,18-6,74) dan status ibu rumah tangga (OR=2,54; 95% CI=1,00-8,29) dikaitkan dengan peningkatan peluang pemberian ASI eksklusif. Hasil wawancara menunjukkan bahwa kurangnya pengetahuan ibu tentang manfaat pemberian ASI eksklusif merupakan prediktor kuat untuk tidak melakukan menyusui secara eksklusif. Sebagian besar ibu yang diwawancarai percaya bahwa menyediakan makanan selain ASI dapat mempercepat pertumbuhan anak-anak mereka.

Kesimpulan: Kurangnya pengetahuan tentang manfaat pemberian ASI eksklusif merupakan faktor prediktor yang dominan dan berpotensi menghambat pemberian ASI eksklusif. Promosi pemberian ASI eksklusif harus

ditingkatkan oleh petugas kesehatan untuk ibu sehingga mereka dapat memahami manfaat pemberian ASI eksklusif pada anak-anak.

Kata Kunci: ASI eksklusif, dukungan keluarga, pendidikan ibu, pengetahuan ibu

INTRODUCTION

Exclusive breastfeeding is given to baby breastfeeding without any additional food other liquids such as formula feeding, fruit, tea, honey and solid foods such as banana, papaya, porridge, biscuits and other.¹ Breastfeeding is very important for a given plenary because in addition to meet the nutritional needs of infants, breastfeeding also can increase baby endurance.² Giving solid foods too early may interfere exclusive breastfeeding, and increased illness in infants. In addition, no evidence to support that solid food at the age of 4 or 5 months more profitable. On the contrary, it will have a negative impact on the health of the baby. Because the baby is not fully developed digestive to digest solid foods.^{3,4}

Healthy babies generally do not require additional food until 6 months, but in certain circumstances be justified to begin giving solid foods after 4 months, although not yet reached 6 months. For example, because weight does not increase or found other signs that indicate exclusive breastfeeding not going well.⁵

A total of 193,000 Indonesian children lose the opportunity to live before the age of 5 years. Although the infant mortality rate in the world fell in the last 10 years, United Nations International Children's Emergency Fund (UNICEF) said the infant mortality rate in Indonesia is still high. When compared to ASEAN countries, the infant mortality rate in Indonesia was 3.4 times higher than Malaysia and 1.3 times higher than the Philippines.⁶

One way to lower the infant mortality rate is the exclusive breastfeeding in infants.^{7,8} Exclusive breastfeeding also increases nutritional status of children and improve the nutritional status of the population towards achieving a superior quality of human resources. If not

exclusively breastfeeding and formula feeding is replaced with the baby will not get immunity.⁹

Breastfeeding has many benefits that are good for the growth and development of infants. Breastfeeding may also lower the risk of acute and chronic diseases. McNeil et al suggest that breastfed babies have a lower risk of otitis media, asthma, type 1 and 2 diabetes, atopic dermatitis, and infections of the lower respiratory tract.¹⁰ Breastfeeding can protect babies from diseases such as measles and influenza. Breastfeeding is the only natural food for babies whose mothers. Breastfeeding has a very small risk of allergy compared with other nutrients.¹¹

Results of the 2012 Indonesia Demographic and Health Survey (IDHS) known that in Indonesia only 42% infants under six months were exclusively breastfed. Until 2015, coverage of exclusive breastfeeding in Indonesia only reaches 65%. Data from the Ministry of Health of the Republic of Indonesia (2013) shows in South Kalimantan number of exclusive breastfeeding execution only reached 58.7%.¹²

The low numbers of breastfed infants can be affected by various factors, both internal and external. Internal factors include the level of knowledge of the mother, maternal age, maternal education and maternal perceptions.¹³ While external factors including the people closest to the support, the support of her husband, and the socio-economic conditions, the increasing promotion of infant formula and culture of the local environment.^{14,15} This study aimed to determine factors associated with exclusive breastfeeding among mothers in Banjarmasin, South Kalimantan.

METHOD

This study was conducted in the city of Banjarmasin, South Kalimantan, Indonesia from June to December 2016. This is quantitative study with a case-control design. Inclusion criteria for this study were mothers who exclusively breastfed and not exclusively breastfed, mothers who stay at home with their children, mothers who have children aged 7-24 months. The exclusion criteria in this study were severely ill infants, infants who have a physical disability, or particular problems, low birth weight babies, and a history of premature (gestation <37 weeks).

The population in this study is the mother who has a toddler with age 6 months to 12 months in the Banjarmasin Tengah Sub-District, Banjarmasin City. The research sample was divided into two groups, the first group was 136 mothers who did exclusively breastfed for 6 months or more (control group) and the second group was 122 mothers who did not breastfeed exclusively (case group) with purposive sampling. The dependent variable in this study was exclusive breastfeeding. While the independent variable in this study was the mother's age, mother's education, mother's knowledge about exclusive breastfeeding, maternal health conditions, family income, the number of births, family support,

maternal employment and promotion of infant formula.

Respondents initially were given an explanation about the purpose of the study, and then they were asked to fill out the consent form be a respondent. Afterward, they were asked to fill out questionnaires about mother's knowledge of exclusive breastfeeding, implementation of breastfeeding, exclusive breastfeeding reason and not exclusively breastfeeding reason, besides that mother also asked to fill in socio-demographic data. The data obtained from the first step of collecting was analyzed by SPSS for window 21.00, bivariate analysis using Chi-square test and analyzed by multivariate logistic regression test.

RESULT

In this study, there are 136 mothers who exclusively breastfed their babies. Most mothers breastfeed their babies immediately after birth (55.9%). In this study 44.8% of mothers breastfeed their babies <1 hour ago and 36.8% of mothers breastfeed their babies 1-3 hours ago. Most mothers breastfeed their babies 6-8 times per day (65.8%). Most mothers breastfeed 15-30 minutes each time (64%) and most mothers breastfeed their babies until the age of 13-18 months (44.1%) (Table 1).

Table 1.
Implementation of Breastfeeding (n=136)

Indicators	N	%
When did you first breastfeed your baby?		
Immediately after birth	76	55.9
2 hours after birth	21	15.4
More than 2 hours after birth	24	17.6
The day after birth	10	7.3
Not remember	5	3.7
When did the last time you breastfeed your baby?		
<1 hours ago	61	44.8
1-3 hours ago	50	36.8
>3 hours ago	25	18.4
Frequency of breastfeeding in a day		
<6 times	34	25
6-8 times	89	65.4
>8 times	13	9.6
Breastfeeding duration		

Less than 15 minutes	32	23.5
15-30 minutes	87	64
> 30 minutes	17	12.5
Length time of breastfeeding (months)		
6	22	16.2
7-12	30	22.1
13-18	60	44.1
19-24	24	17.6

In Table 2. known about the reasons of mothers give exclusively breastfed their babies. Most mothers want their children to grow and thrive (47.8%), 14.7% mothers exclusively breastfed because they feel an

obligation to a mother and 14.7% mothers exclusively breastfed because they want their children to be smart.

Table 2.
Reasons for Exclusive Breastfeeding on Infant (n=136)

Reasons	N	%
Obligations as a mother	20	14.7
To be fast growing and developing infant	65	47.8
To make baby has a strong endurance	10	7.3
Cheap and practical	12	8.8
Lose mother weight	9	6.6
Babies become smarter	20	14.7

In this study also asked the reason of mothers that do not exclusively breastfed her baby (Table 3). There are 122 mothers who did not give exclusive breastfeeding their baby. 31.1% of mothers do not exclusively breastfeed since breastfeeding does not come

out. A mother who claimed her breastfeeding does not come out to replace it with formula feeding. In addition, 20.5% of mothers choose to give formula despite having breastfed, 17.2% of mothers do not breastfeed because of work.

Table 3.
Reasons for Not Exclusive Breastfeeding on Infant (n=122)

Reason	N	%
Poor maternal health conditions	6	4.9
Working mothers	21	17.2
Changing the shape of the breast	4	3.2
Breastfeeding does not come out	38	31.1
The amount of breastfeeding is too little	8	6.6
Not allowed by husband	2	1.6
Infant refuses to breastfeed	7	5.7
Pregnant soon after giving birth	8	6.6
Existing formula feeding	25	20.5
No Nipples	3	2.4

Most respondents had heard about exclusive breastfeeding (79.1%). Most respondents received information about exclusive breastfeeding from the family (39.5%) and 29.8% of the mass media. Most of the respondents initiate breastfeeding immediately after birth (57%). Most of the respondents know that the frequency of

breastfeeding will affect breastfeeding production (56.6%). 58.1% respondents know the minimum duration of exclusive breastfeeding and 41.9% of respondents did not know the minimum duration of exclusive breastfeeding. Most of the respondents know if breastfeeding can prevent diarrhea in infants (56.2%).

Table 4.
Knowledge of Respondents on Exclusive Breastfeeding (n=258)

Question		N	%
Have you ever heard of exclusive breastfeeding?	Yes	204	79.1
	No	54	20.9
Source of information about exclusive breastfeeding	Friends	21	8.1
	Mass Media	77	29.8
	Health Institution	58	22.5
	Family	102	39.5
When should breastfeeding begin?	Immediately	147	57
	2-24 hours after birth	58	22.5
	>24 hours after birth	40	15.5
	>1 day after birth	13	5.04
Does frequent of sucking help for breastfeeding production?	Yes	146	56.6
	No	52	20.2
	Do not know	60	23.3
	How long should be given exclusive breastfeeding?	<6 months	108
Does exclusive breastfeeding prevents diarrhea on an infant?	≥6 months	150	58.1
	Yes	145	56.2
	No	47	18.2
	Do not know	66	25.6

Characteristics of maternal age in this study varied (Table 5), the percentage of mothers aged 20-29 years with exclusive breastfeeding of about 60.7%. Based on the statistical results ($p=0.001$) showed a significant association between exclusive breastfeeding to the maternal age. Mothers aged under 30 years who exclusively breastfeed their children than mothers aged over 30 years. The results showed no significant association between parity and exclusive breastfeeding ($p=0.71$). This is due to primiparous and multiparous mothers have the same opportunity to give exclusive breastfeeding, depending on other factors. Results of this study on the health condition variable categorized into hampers and do not hinder. In this study showed no association with the mother's health condition and

exclusive breastfeeding. This is consistent with the statement related to mothers health conditions, 64% of mothers whose health inhibit breastfeeding worried that her baby contracting the disease. In this study was found that family support has a significant association between exclusive breastfeeding. Most of the mothers in this study received support from nearest people. This study found that nearest people to support mothers to give exclusive breastfeeding are the husband, parents, mother-in-laws, siblings, friends, and neighbors. Support from the husband is the most numerous. The support is usually provided by the nearest person in the form of words and motivation.

Table 5.
Description of Exclusive Breastfeeding Based on Age, Knowledge, Mother's Health Condition, Mother's Education, Formula Feeding Promotion, Parity, Income, Working Mother and Family Support by Chi Square Test

Variable	Exclusive Breastfeeding				OR 95% CI	P Value
	Yes	%	No	%		
Mother age (years)						
< 20	12	9.8	18	13.2	2.96 (1.52-7.34)	0.001
20-29	74	60.7	89	65.4	1.85 (1.05-3.66)	
≥30	36	29.5	29	21.4	2.82 (1.78-6.31)	
Mothers health condition						
Hamper	5	4.1	87	64	2.53 (1.27-4.79)	0.023
Do not hamper	117	95.9	49	36	1.18 (0.70-4.96)	
Parity						
Primiparous	83	68	66	48.5	3.65 (1.05-5.86)	0.71
Multiparous	39	32	70	51.5	2.10 (1.15-4.95)	
Family income						
≥IDR 2.085.050	85	69.7	97	71.3	2.34 (1.34-3.80)	0.63
< IDR 2.085.050	37	30.3	39	28.7	2.67 (1.24-4.54)	
Working status						
Working mother	33	27.1	34	25	1.66 (1.10-3.78)	0.015
Housewife	89	72.9	102	75	2.20 (1.25-3.44)	
Mothers education						
Elementary school	4	3.3	35	25.7	2.41 (1.58-3.65)	0.002
Middle school	14	11.5	46	33.8	2.18 (1.65-4.20)	
High school	56	45.9	38	27.9	1.64 (1.11-2.57)	
College	48	39.3	17	12.5	2.30 (1.80-3.11)	
Mothers knowledge						
High	93	76.2	74	54.4	2.33 (0.94-3.50)	0.001
Low	29	23.8	62	45.6	2.56 (1.04-4.59)	
Family support						
High	99	81.1	67	49.2	1.72 (1.20-2.47)	0.001
Low	23	18.9	69	50.8	2.56 (1.45-5.30)	
Promotion of feeding formula						
Exposed	104	85.2	127	93.4	3.53 (1.23-5.86)	0.305
Unexposed	18	14.8	9	6.6	2.65 (1.30-4.65)	
Total	122	100	136	100		

P<0.05 is significant

The level of income in this study was categorized based on the regional minimum wage of South Kalimantan in Indonesian Rupiah (IDR) 2,085,005 million per month. Most subjects have income levels above the regional minimum wage. This means that people in this area can be categorized as an enough prosperous family. However, the category of income per month does not have a significant association on exclusive breastfeeding (p=0.63). Income related to the economic problems that can be related to the family's ability to provide facilities to meet the needs of the information of exclusively breastfed. In this study showed no association between promotion of infant formula and exclusive breastfeeding. Most

respondents in this study had been exposed to information about the feeding formula (85.2%). The results of this study indicate there is a significant association between working mothers and exclusive breastfeeding (Table 5). The results of this study showed a significant association between maternal education level with exclusive breastfeeding (p=0.002). Most respondents who exclusively breastfed educated high school and college, this means a higher level of education will increase exclusive breastfeeding.

Based on logistic regression results (Table 6) in the variable of mothers education showed a score p=0.005 and OR=1.34, meaning mothers with low educational 1.34 times greater not to provide exclusive breastfeeding than mothers with

high education. Mothers' knowledge of exclusive breastfeeding was factored that most influence exclusive breastfeeding (Table 6). A mother who does not have a high knowledge of exclusive breastfeeding

has the potential to fail in implementing exclusive breastfeeding 2.24 times higher than those who have a good knowledge of exclusive breastfeeding.

Table 6.
Results of Logistic Regression Analysis

Variable	P Value	B	Wald	OR 95% CI
Mothers education	0.005	0.541	1.342	1.34 (1.18-1.82)
Mothers knowledge	0.001	0.322	1.145	2.24 (1.69-2.42)
Mother age	0.062	1.765	3.543	2.82 (0.18-6.74)
Family support	0.328	0.934	4.982	2.06 (0.02-8.93)
Working status	0.123	1.239	7.94	2.54 (1.00-8.29)
Mothers health condition	0.082	0.231	5.392	1.34 (0.08-3.93)

P<0.05 is significant

Constanta = -1.94

The 'fit' model or regression equation is as follows:

Y (*exclusive breastfeeding*) = constant + 0.541 (mothers education) + 0.322 (mothers knowledge) + ϵ = 74%.

DISCUSSION

Maternal age determines maternal health as it relates to the condition of pregnancy, childbirth and postpartum, parenting and breastfeeding. Mother's age less than 20 years is still not ready physically and socially in the face of pregnancy, childbirth, and breastfeeding. In less than 20 years of age, physical, psychological, and social is still not ready so it can disturb the psychological balance and can affect breastfeeding production.¹⁶ While those aged over 35 is relatively reduced hormone production, resulting in decreased lactation process.¹⁷

In the period of healthy reproductive age known safe for pregnancy, childbirth, and breastfeeding is 20-35 years. Therefore, in accordance with the period of reproduction is very good and very supportive of exclusive breastfeeding, while aged less than 20 years old are considered not ready physically, mentally, and psychology in dealing with pregnancy, childbirth, and breastfeeding. Age over 35 years is considered dangerous because of declining physical condition, but it can occur in infants as well as the inherent

risk may increase the difficulty in pregnancy, childbirth and postpartum.¹⁸

In addition to age, education also gives considerable influence on exclusive breastfeeding. In this study, the majority of respondents are highly educated. If the mother's educational level is low then the knowledge of mothers about breastfeeding will also be low, so that exclusive breastfeeding for 6 months will not be achieved. Moreover, coupled with ignorance about the length of breastfeeding exclusively in accordance with the recommended.¹⁹ Mothers who have higher education levels are generally more open to knowledge about health. Mothers with higher education levels have better knowledge about nutrition. Mothers who have knowledge of good nutrition will pay attention to the nutritional needs of children. Similarly, in the understanding of the benefits of breastfeeding for the child, it is generally stated that women who have high levels of education have a high level of understanding.²⁰

In the study showed a significant association between maternal health conditions and exclusive breastfeeding (Table 5). Mother's inability to overcome the problems that arise caused doubt by the mother, if she is able to breastfeed or not, these conditions will ultimately lead to failure of breastfeeding.²¹

Number of mothers who exclusively breastfed almost equal in number between primiparous and multiparous mothers. Parity-related to the experience of exclusive breastfeeding, breastfeeding at the birth of a previous child, feeding habits in the family, as well as knowledge about breastfeeding affect the mother's decision to breastfeed or not. Support the nearest person was needed, especially in the first pregnancy. In exclusive breastfeeding, mothers who breastfeed knowledge of its first exclusive breastfeeding tends to be lower compared with mothers who had experienced in the previous lactation.²²

According Cheatterji and Frick, states that the return to work within the first three months after birth is associated with a decrease in breastfeeding by 16% -18%, and a reduction in breastfeeding duration about 4-5 weeks.²³ Working mothers usually have difficulty breastfeeding, when it started to go back to work then the child will be entrusted to the mother in law and will be given breastfeeding if a baby cries. In contrast to not working mothers, generally, breastfeed whenever the baby with greater frequency than working mothers. Not working mothers have a lot more time with the baby.²⁴

The majority of working mothers prefer to give formula instead of breastfeeding to their babies formula because they thought more practical and can be made by others. Due to working mothers can not be related in a long time with the baby, the mother consequently tends to give formula and given by bottle. This leads to reduced frequency of breastfeeding and decline breastfeeding production.²⁵ Such conditions encourage mothers to give formula because nutrition should be giving to infants. For working mothers are forced to give formula to their babies because the mother spent a lot of time for working.²⁶

The low level of knowledge of the mother can affect exclusive breastfeeding, both for working mothers and housewives.

Most mothers are busy working reasoned, therefore, can not provide breastfeeding.²⁷

Knowledge is the result out and this happened after sensing of an object. One's knowledge obtained from several sources such as trust of traditions, customs, and religion.²⁸ In this study, the low level of knowledge of mothers is influenced by various factors such as the erroneous belief, lack of breastfeeding experiences and the influence of advertising formula.²⁹ In this study showed 35.3% low knowledge mothers breastfeed exclusively. Mothers with low knowledge received encouragement from parents, close relatives, and close friends that the best food for a baby there is nothing better than breastfeeding from her own mother 48. That is the mother's reason to breastfeed exclusively. Knowledge can also be obtained hereditary from parents. Knowledge will be distributed from parents of their children. Knowledge can also be sourced from other people.

A mother must have good knowledge in nursing. Loss of knowledge about breastfeeding means a serious loss of confidence a mother to be able to provide the best care to her baby and a baby will lose vital food source. Lack of knowledge about exclusive breastfeeding visible from early use of infant formula in urban areas and the provision of bananas or mushy rice as an additional food. It can be concluded, mothers have a high knowledge of exclusive breastfeeding will give exclusive breastfeeding in infants contrary to the mothers has low knowledge. This is due, of the mother has a high knowledge about breastfeeding generally learn about the benefits of breastfeeding so that mothers give exclusive breastfeeding.

CONCLUSIONS

Maternal age and maternal knowledge are the variables that have significant effect on exclusive breastfeeding on multivariate

analysis result. Lack of knowledge about benefits of exclusive breastfeeding was the dominant predictor factor and potentially derail exclusive breastfeeding. Most mothers in this study hold that provide food other than breastfeeding will accelerate the growth of their baby. Promotion of exclusive breastfeeding in all health centers needs to be improved, especially in women with low education. Support closest person must also be increased to motivate the mother to give exclusive breastfeeding.

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