

ICASH-A45

FACTORS ASSOCIATED WITH MATERNAL KNOWLEDGE ON EXCLUSIVE BREASTFEEDING IN CIPAYUNG SUB-DISTRICT, DEPOK CITY, INDONESIA

Alifani Faiz Faradhila*, Sandra Fikawati

Reproductive Health Department, Faculty of Public Health, Universitas Indonesia

*Corresponding authors' e-mail: alifani.faiz@ui.ac.id

ABSTRACT

Background: Exclusive breastfeeding practice during six-months could reduce morbidity and mortality of mother and infant. This study aims to examine the sociodemographic characteristics as the factors associated with knowledge among six-months exclusively breastfeeding mothers in Cipayung Sub-District, Depok City, Indonesia.

Methods: This was a cross-sectional collected from 122 mothers with six-months exclusively breastfeeding. The participants selected through purposive sampling in Cipayung Sub-District in year 2017.

Results: Only 80% mothers exclusively breastfeeding for six months. More than half mothers (59%) had high educational level, advance and tertiary. Most of mothers (91%) were unemployed. Approximately 22.1% mothers had high status of social economic. Eighty-two percent mothers who have children more than one. Six-months exclusively breastfeeding mothers who had high educational level were more likely has high knowledge than those with low educational level ($p=0.010$; $OR=2.85$; $CI95\%=1.34-6.06$). Mothers who had low educational level were 2.85 times higher risk to have low maternal knowledge of exclusive breastfeeding compared with high educational level.

Conclusions: Knowledge of exclusive breastfeeding among mothers was significantly associated to educational level. Interventions emphasizing practical education should therefore be targeted at addressing factors that associated knowledge of exclusive breastfeeding.

Keywords: maternal knowledge, breastfeeding, exclusive, Indonesia

INTRODUCTION

Exclusive breastfeeding benefits for newborn babies and mothers are well-documented. Globally, the practice of exclusive breastfeeding is still low despite of it has many advantages. An exclusive breastfeeding behavior is influenced by the level of maternal knowledge as well as other sociodemographic factors. Improving awareness to exclusive breastfeeding behavior will require an understanding as an embodied experience within social context [1]. Exclusive breastfeeding is defined as an infant's consumption of human milk with no supplementation of any type (no water, no nonhuman milk, and no foods) except for vitamins, minerals, and medications. World Health Organization (WHO) and United Nations International Children's Fund (UNICEF) recommend exclusive breastfeeding for six months following birth, then continued until two years with complementary foods [2].

Exclusive breastfeeding practice during six months could reduce morbidity and mortality of mothers and infants. Breast milk has a lot of nutrients needed for growth and development of the babies in line with their stages of age. The baby's suction reflex helps uterus contraction, so it will make the process of uterus involution does faster. It also contributes to reduce postpartum hemorrhage among mothers. More often mothers breastfeed their babies, the production of breast milk also be more overflow and enough to fulfill the baby's nutritional needs and uterus contraction becomes better [3]. Non-exclusive breastfeeding gives contribution about 11.6% children under-five mortality rate. A reason of the failed exclusive breastfeeding is because of the practice without a high maternal knowledge. A practice based on knowledge would more imperishable than without constructed by knowledge. Maternal knowledge was an important factor in practice among six-months exclusively breastfeeding mothers [4].

According to the data report of The State of The World's Children in year 2017 released by United Nations International Children's Fund (UNICEF) in early 2018, the percentage of babies with less than six months who were breastfed by mothers was only 40%. Otherwise, the percentage in East Asia and Pacific was 28%, lower than South Asia (52%) [5]. In Indonesia, the percentage of babies with exclusive breastfeeding less than six months was 54% and this target is still far from national target of exclusive breastfeeding, 80% [6]. Based on *Profil Kesehatan Indonesia 2016*, West Java Province had 39.6% six-month exclusive breastfeeding, this percentage still was under than two neighbouring region, DKI Jakarta (41%) and Central Java (42.7%). In addition, the percentage of breastfeeding in Depok was under a half (41.9%) and this percentage has decreased 23.9% from 2013 to 2016 [7]. This case may be influenced by maternal knowledge of mothers which as one of the sociodemographic factors [5].

Maternal knowledge is one of the important factors to build of six-month exclusive breastfeeding behavior among mothers [8]. In accordance to a research in Ghana, the factors associated with maternal knowledge consisted of age, educational level, occupational status, social economic status, and number of children [9]. Additionally, health practitioners should give counseling, information, and education about six-months exclusive breastfeeding based on their own condition.

This study aimed to examine the sociodemographic characteristics as the factors associated with knowledge among six-months exclusively breastfeeding mothers in Cipayung Sub-District, Depok, Indonesia. It will provides recommendations for public health interventions and policies to improve six-months exclusive breastfeeding. It is eventually can improve mother and child health.

METHODS

This was an observational study with cross-sectional study design. In a cross-sectional study, the investigator measures the outcome and the exposures in the study at the same time [10]. The participants in a cross-sectional study are selected based on criteria of exclusion and inclusion set. A cross-sectional study design is used for population based surveys and to assess the prevalence of samples in a point time approach. This study can usually be conducted relatively faster and inexpensive. It gives information about prevalence of outcomes and exposures and this information can be useful for other study designs. Furthermore, this study can help to estimate the odds ratios to study the association between exposure and outcome [10,11].

This study used primary data from the study "*Intervensi Peningkatan ASI dan MPASI dalam Rangka Penerapan Program 1000 Hari Pertama Kehidupan*" supported by Pusat Kajian Gizi Kesehatan FKM UI and Kementerian Kesehatan RI. The dependent variable in this study was maternal knowledge of six-month exclusive breastfeeding and the independent variables were age of mothers, educational level, occupational status, social economic status as combination of education, income, and occupation, and number of children. The data were collected in Cipayung Sub-District, Depok involving three villages, such as Cipayung Jaya, Pondok Terong, and Pondok Jaya.

The population of this study was exclusive breastfeeding mothers who registered in study “*Intervensi Peningkatan ASI dan MP-ASI dalam Rangka Penerapan Program 1000 Hari Pertama Kehidupan*”. The participants selected through purposive sampling in Cipayung Sub-District in year 2017 with inclusion and exclusion criteria. The inclusion criteria was six-month exclusive breastfeeding who were willing to be interviewed and the exclusion criteria was exclusive breastfeeding mothers with chronic disease such as cancer and HIV/AIDS. Total participants in this study were 122 mothers, calculated by the hypothesis testing with proportions data formula similar to related previous study. Maternal knowledge of exclusive breastfeeding was assessed based on answer given to the questionnaire. The investigator kept information and identity of participants. Data analysis employed Chi-square test for univariate analysis to give information the prevalence of exposure and outcomes, then bivariate data to estimate the odds ratios of the association between exposure and outcome.

RESULTS

Maternal knowledge of exclusive breastfeeding

Table 1 presents the category of maternal knowledge of exclusive breastfeeding. There were 122 mothers who completed six-months exclusively breastfeeding as the participants in this study. Seventy-four of 122 mothers (60.7%) had high knowledge about exclusive breastfeeding, otherwise 48 of 122 mothers (39.3%) had low knowledge.

Table 1. Maternal knowledge of exclusive breastfeeding

Maternal knowledge	Frequency (n)	Percentage (%)
Low	48	39.3
High	74	60.7
Total	122	100

Characteristics of the participants

Table 2 presents the category of sociodemographic characteristics of participants. Eighty point three percent of the mothers in the low risk age group, 20 to 35 years with mean age of 29.6 ± 5.62 years (n=98/122). Majority of breastfed mothers were in range of low risk age group which is still in reproductive age period. More than half of the mothers have completed high educational level, consisting of 54.9% at advance (n=67/122) and 4.1% at tertiary (n=5/122). Thus, it makes up the total mothers who had completed high education level was 59% (72/122). Most of them (91%) were unemployed that might be related to the culture in this area that breastfed mothers should be a housewife only. Approximately 22.1% of mothers were grouped into capable of social economic status (n=27/122) and majority were incapable (n=95/122). Only 12.3% of all mothers who had children more than three (n=15/122) and 69.7% mothers had 2-3 children (n=85/122), so that the percentage of mothers who had more than a child was 82% (n=100/122).

Table 2. Sociodemographic characteristics (n=122)

Characteristics	Frequency (n=122)	Percentage (%)
Age of mothers		
<20	1	0.8
20-35	98	80.3
>35	23	18.9
Educational level		
Primary/Elementary School	18	14.8
Middle/Junior High School	32	26.2
Advance/Senior High School	67	54.9
Tertiary/University	5	4.1
Occupational status		

Characteristics	Frequency (n=122)	Percentage (%)
Not employer	111	91
Employer	11	9
Social economic status		
Incapable	95	77.9
Capable	27	22.1
Number of children		
1	22	18
2-3	85	69.7
>3	15	12.3

Maternal knowledge and associated factors

Table 3 shows the result of bivariate analysis using cross-tabulation. There are two categories in every sociodemographic factors. The sociodemographic factors consisted of age of mothers, educational level, occupational status, social economic status, and number of children.

Table 3. Sociodemographic factors associated with maternal knowledge of six-months exclusive breastfeeding (n=122)

Factors	Maternal knowledge of exclusive breastfeeding				Total		OR (95% CI)	P value
	Low		High		n	%		
	n	%	n	%				
Age of mothers								
Low risk (20-35 years old)	39	39.8	59	60.2	98	100	0.908 (0.362-2.278)	1.000
High risk (<20 and >35 years old)	9	37.5	15	62.5	24	100		
Educational level								
Low (<SHS)	27	54.0	23	46.0	50	100	2.851 (1.342-6.056)	0.010
High (≥SHS)	21	29.2	51	70.8	72	100		
Occupational status								
Not Employer	44	39.6	67	60.4	111	100	0.870 (0.240-3.148)	1.000
Employer	4	36.4	7	63.6	11	100		
Social economic status								
Incapable	40	42.1	55	57.9	95	100	1.727 (0.688-4.339)	0.343
Capable	8	29.6	19	70.4	27	100		
Number of children								
1	11	50	11	50	22	100	1.703 (0.672-4.312)	0.374
>1	37	37	63	63	100	100		

Six-months exclusively breastfeeding mothers who had high educational level were more likely to have high knowledge than those with low educational level ($p=0.010$; $OR=2.85$; $CI_{95\%}=1.34-6.06$). Mothers who had low educational level were 2.85 times higher risk to have low knowledge of exclusive breastfeeding compared with high educational level.

DISCUSSION

The participants of this study were 122 mothers who six-month breastfed exclusively in Cipayung Sub-District, Depok, Indonesia. All of participants did not have any chronic disease such as cancer and HIV/AIDS. Recognizing the important health benefits of breastfeeding based on previous evidences, this study aimed to examine sociodemographic characteristics and determine associated factors of maternal knowledge among six-month exclusive breastfeeding mothers. Majority of mothers were knowledgeable about exclusive breastfeeding. In Nigeria, a study reported 95.3% of mothers had heard about exclusive breastfeeding and 82% of them could define correctly about exclusive breastfeeding [12]. It was contrast with a similar study in Nigeria that reported low knowledge about exclusive breastfeeding only 30% (n=179) of the mothers who were adequately informed [13].

This study investigated the association between sociodemographic characteristics and maternal knowledge of exclusive breastfeeding. There were five characteristics as the factors: age of mothers, educational level, occupational status, social economic status, and number of children. To our knowledge, no previous study has examined maternal knowledge of exclusive breastfeeding in Cipayung Sub-District, Depok. Our findings suggest that sociodemographic factors played important roles on the knowledge level of exclusive breastfeeding.

The results of this study shows the level of knowledge of exclusive breastfeeding among 122 mothers who completed six-months exclusively breastfeeding in Cipayung Sub-District, Depok. The maternal knowledge has been divided into two categories, low and high. About 60.7% (n=74/122) mothers had high maternal knowledge, otherwise 39.3% mothers (n=48/122) had low maternal knowledge of exclusive breastfeeding.

Mothers who breastfed their children mostly aged 20-35 years (80.3%) which is on the best period of woman's reproductive stage. According to the cross tabulation result, there is no significantly association of age with knowledge of exclusive breastfeeding (p value=1.000; CI 95%=0.362-2.278). More than half (54.9%) have completed in advance/SHS educational level and a few mothers who completed tertiary/university educational level. The result of this study showed that educational level was significantly associated with knowledge of exclusive breastfeeding (p value=0.010; OR=2.851; CI 95%=1.342-6.056). The association between two variables was measured by OR value as 2.851, it means exclusive breastfeeding mothers with low educational level (under advance/SHS level) more risks 2.85 times higher to have low knowledge of exclusive breastfeeding than them with high educational level (advance/SHS level and above). Education is the process of changing people's attitude and behavior through the efforts of teaching and training [14]. The higher education will make someone can receive and understand the information rapidly, influencing individual knowledge [15]. Therefore, the educational level of mothers was related to maternal knowledge of exclusive breastfeeding.

Based on occupational status as one of the sociodemographic characteristics, almost of all exclusive breastfeeding mothers (91%) were not employed and most of them (60.4%) had higher knowledge. The cross tabulation result in this study showed that the association was no significant (p value=1.000). Another factor such as social economic status which found that less than half of mothers who had high social economic status (22.1%). The association of social economic status with knowledge of exclusive breastfeeding has been shown in this study and the result was not significantly associated (p value=0.343; OR=1.727; CI 95%=0.688-4.339) but good social economic status increased almost 2 times the likelihood of having high knowledge compared to low social economic status.

Beside of that, the result also showed most of six-month exclusive breastfeeding mothers had 2-3 children delivered (69.7%). The result of analysis showed the relationship between number of children and maternal knowledge of exclusive breastfeeding was not significantly associated but

mothers with living child more than one were 2 times more likely to have high knowledge than mothers who only had one child (p value=0.374; OR=1.703; CI 95%=0.672-4.312).

The result of this study has a limitation. The findings of this study cannot be generalized for other similar settings as the study participants were recruited from a Cipayung Sub-District in Depok, but it could be considered for the context of this study.

CONCLUSION

Mothers were adequately informed about six-month exclusive breastfeeding. The knowledge of exclusive breastfeeding among mothers was important to build a behavior of exclusive breastfeeding to be more imperishable. The knowledge of exclusive breastfeeding among mothers was significantly associated with educational level. Mother's age, occupation, social economic status and number of children were not significantly associated with knowledge of exclusive breastfeeding. Interventions should be targeted to address factors associated with knowledge of exclusive breastfeeding. Findings from this study provides evidence that maternal knowledge of high educational status impacts exclusive breastfeeding practices during six months following birth. Healthcare providers and public health professionals should educate mothers about breastfeeding. A policy recommendation should be performed with the collaboration with stakeholders, they should make sure every mother can practice six-month exclusive breastfeeding.

ACKNOWLEDGEMENTS

The authors would like to express special thanks to Pusat Kajian Gizi Kesehatan (PKGK), Department of Nutrition, Faculty of Public Health, Universitas Indonesia. We acknowledge the support and contributions of all officials for successful completion of the study.

CONFLICT OF INTERESTS

All authors have no conflict of interests of this study.

REFERENCES

1. Agunbiade, OM and Ogunleye, OV. Constraints to exclusive breastfeeding practice among breastfeeding mothers in Souhwest Nigeria: implications for scaling up. *International Breastfeeding Journal*. 2012;7(5).
2. UNICEF. The state of the world's children 2017: children in a digital world. New York: United Nations International Children's Fund. 2018.
3. Fikawati, S, Ahmad S, Khaula K. Nutrition of mother and baby. Depok: Raja Grafindo Persada. 2015.
4. Notoatmodjo, S. Promosi kesehatan dan perilaku kesehatan (Health promotion and health behavior). Jakarta: Rineka Cipta. 2012.
5. WHO/UNICEF. Global nutrition targets 2025: breastfeeding policy brief. Geneva: World Health Organization. 2014.
6. Kementerian Kesehatan. Profil kesehatan Indonesia 2016 (Health profile in Indonesia 2016). Jakarta: Kementerian Kesehatan RI. 2017.
7. Dinas Kesehatan. Profil Kesehatan Kota Depok 2016 (Health profile in Depok City 2016). Depok: Dinas Kesehatan Kota Depok. 2017.
8. Haqiqhi M and Varzande R. Maternal knowledge and attitude toward exclusive breastfeeding in six-months after birth in Shiraz, Iran. *International Journal of Pediatrics*, 2016, 4(11):3759-3767.
9. Mogre, V, Dery, M, Gaa, PK. Knowledge, attitudes and determinants of exclusive breastfeeding practice among Ghanaian rural lactating mothers. *International Breastfeeding Journal*, 2016;11(1):1-8.
10. Olsen J, et al. An Introduction to epidemiology for health professionals. Los Angeles: Springer. 2010.
11. Setia, MS. Methodology series module 3: cross-sectional studies. *Indian Journal Dermatol*. 2016;61(3):261-264.
12. Onah S, et al. Infant feeding practices and maternal sociodemographic factors that influence practice of exclusive breastfeeding among mothers in Nnewi South-East Nigeria: a cross-sectional and analytical study. *International Breastfeeding Journal*. 2014;9:6.
13. Oche MO, et al. Knowledge and practice of exclusive breastfeeding in Kware, Nigeria. *Africa Health Science*. 2011;11(3).
14. Budiman and Riyanto A. Kapita selekta kuesioner pengetahuan dan sikap dalam penelitian kesehatan (Capita selecta questionnaire of knowledge and attitude in health research). Jakarta: Salemba Medika. 2013.
15. Sriningsih, I. Faktor demografi, pengetahuan ibu tentang air susu ibu dan pemberian asi eksklusif (Demography factors, maternal knowledge about breastmilk and breastfeeding). *Jurnal Kesehatan Masyarakat*. 2011;6(2).