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Factors that Positively Influence to Improve Exclusive Breastfeeding

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Abstract—Based on World Health Statistics infant mortality rate in the world in 2016 is 41 per 1,000 live births. This value is still quite high if comparing with the Sustainable Development Goals (SDGs) at 25 per 1,000 live births. The optimal breastfeeding under two years of age has the greatest potential for survival of all precaution. An effort to prevent infant mortality is by exclusive breastfeeding. Coverage of exclusive breastfeeding in Special Region of Yogyakarta Province in 2017 amounted to 74.9% is still below from the national target of 80%. The aim of this research was to find the factors that positively influence to improve coverage of exclusive breastfeeding. The research method used analytic with cross-sectional design. The result of the study shows that four factors that positively influence to improve exclusive breastfeeding are mother's knowledge, age of maternal, counseling and education, and social support of midwives. Knowledge factors have an important role in taking action to give exclusive breastfeeding. Education about breastfeeding is done during pregnancy and during pregnancy visits. Social support of midwives affect the mother's choice to breastfeeding exclusively. The most common social support is emotional.

Keywords— *exclusive breastfeeding, midwife counselor, early initiation of breastfeeding, infant mortality*

I. INTRODUCTION

The under-five mortality rate in the world in 2016 was 41 per 1,000 live births [1]. This value is still quite large if comparing with the target of the Sustainable Development Goals (SDGs) aims to reduce under-five mortality by at least 25 per 1,000 live births [2]. Provision of breastfeeding optimally can have a major impact on any preventive intervention against child mortality [3]. Increasing duration or quality of breastfeeding could prevent 823,000 child deaths annually [4]. “Maternal under nutrition contributes to 800,000 neonatal deaths annually through small for gestational age births, stunting, and micronutrient” [2].

When the baby only receives breast milk without any additives including water, except for oral rehydration solutions or medicines, the baby is declared to have exclusive breastfeeding. World Health Organization (WHO) and the United Nation International Children's Emergency Fund (UNICEF) recommend that breastfeeding be started within one hour after birth, continue without food or other fluids for the first six months of life and continue with additional age-appropriate feeding until the 2 year old baby [5]. The exclusive

breastfeeding rate was very low despite a high level of knowledge among mothers [6].

World Health Organization recommends all mothers in the world to give exclusive breastfeeding to their babies until the age of 6 months in order to optimize growth, development and health [7]. “The coverage of exclusive breastfeeding nationwide in 2014 amounted to 52.3% is still below the national target of 80%” [8]. The target of exclusive breastfeeding coverage in Indonesia is 80%, but until 2017 the coverage of exclusive breastfeeding in the Special Region of Yogyakarta only reached 74.90% [9]. The highest percentage of exclusive breastfeeding coverage is in Sleman Regency which is equal to 82.62% while the area that has the lowest exclusive breastfeeding coverage is Yogyakarta City at 66.13%. Figure 1 shows that exclusive breastfeeding coverage in the city of Yogyakarta is lower than the exclusive Yogyakarta Province breastfeeding coverage [9].

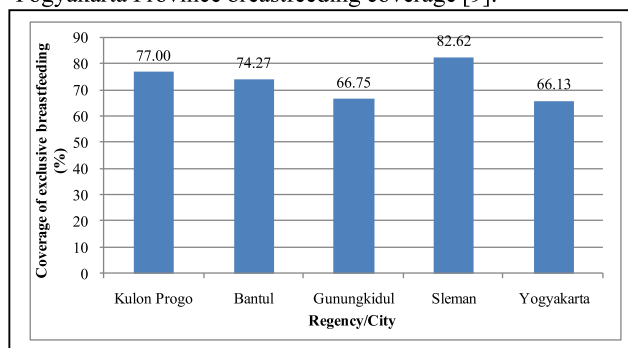


Fig. 1. Coverage of exclusive breastfeeding in Yogyakarta Province in 2017 [9].

The coverage of exclusive breastfeeding in 18 health center in Yogyakarta City can be seen in Table 1. The highest percentage of exclusive breastfeeding coverage is in Health Center Mantrijeron which is equal to 80.41% while the area that has the lowest exclusive breastfeeding coverage is Health Center Umbulharjo I at 35.38%.

TABLE I. COVERAGE OF EXCLUSIVE BREASTFEEDING IN YOGYAKARTA CITY IN 2017 [10]

No.	Health Canter	Baby until 6 month	Exclusive breastfeeding	Percenta ge (%)
1.	Mantrijeron	245	197	80.41
2.	Kraton	128	72	56.25
3.	Mergangsan	118	92	77.97
4.	Umbulharjo I	424	150	35.38
5.	Umbulharjo II	182	118	64.84
6.	Kotagede I	189	98	51.85
No.	Health Center	Baby until 6 month	Exclusive breastfeeding	Percenta ge (%)
7.	Kotagede II	98	67	68.37
8.	Gondokusuman I	507	251	49.51
9.	Gondokusuman II	65	48	73.85
10.	Danurejan I	77	53	68.83
11.	Danurejan II	79	39	49.37
12.	Pakualaman	76	38	50.00
13.	Gondomanan	106	46	43.40
14.	Wirobrajan	223	108	48.43
15.	Gedongtengen	134	50	37.31
16.	Ngampilan	26	15	57.69
17.	Jetis	201	155	77.11
18.	Tegalrejo	339	154	45.43
	Average	178.72	97.29	57.56

Based on data obtained from the health profile of the city of Yogyakarta, it can be seen that the health centers that have the lowest exclusive breastfeeding coverage are Health Center Umbulharjo I, which is 35.38% [10]. The low coverage of exclusive breastfeeding is influenced by several factors, one of which is inadequate maternal knowledge about exclusive breastfeeding. Breastfeeding is not just giving a drink by sucking on the nipples, because without proper and regular guidance from health workers it will cause many obstacles in providing breast milk. Some obstacles in breastfeeding are often faced by mothers, including experience, lack of patience in breastfeeding and lack of knowledge in breastfeeding [11].

Based on a study conducted at the Health Center Umbulharjo I, providing counseling on exclusive breast milk to pregnant women have been conducted routinely, but the enthusiasm of the participants is still lacking. Some pregnant women said that counseling is done in a long and tedious time. Counseling about exclusive breastfeeding is carried out on trimester III pregnant women using flipchart media. The aim of this research was to find the factors that positively influence to improve coverage of exclusive breastfeeding.

II. LITERATURE REVIEW

Appropriate counseling and education about breast-feeding can be adopted to achieve changing attitudes, perceptions of knowledge, and practices of breastfeeding. Pregnancy is the right time to start learning about breastfeeding. Pregnancy care is also a good opportunity to increase breastfeeding knowledge in pregnant women [12]. The results of study conducted by Nishimura et al. [13] showed that exclusive breastfeeding relates with maternal age, education during pregnancy, and the

number of attendance at pregnancy visits. Education about breast-feeding should also be done during pregnancy when the mother visits a pregnancy [13]. The success of initiation breastfeeding and exclusive breastfeeding was also related to the acceptance of information about breastfeeding during pregnancy visits and menu delay was also caused by no participation in the class of pregnant women [14]. There was a significant relationship between maternal knowledge of maternal attitudes in breastfeeding [15]. Factors that influence the increase in knowledge about breastfeeding are > 30 years of age and receive education in antenatal clinics [14].

Other factors that affect directly on mothers and infants include [16]: the hospital and health facilities environment, the home and peer environment, the workplace environment, the community environment, and the public policy environment.

“The importance of exclusive breastfeeding in the first 6 month of life is widely recognized, but most mothers still do not reach this goal” [17]. “Less than half of the mothers in our sample reported exclusive breastfeeding in a rural region of Karnataka, India in the first six months, a rate lower than national and state level rates” [13]. The result of a study in Ghana showed that the opportunity to breastfeed a baby in the first hour by being left in contact with the mother's skin can prevent 22% of neonatal deaths. Breastfeeding promotion programs should emphasize early initiation as well as exclusive breastfeeding [18].

III. METHODOLOGY

This research was an analytical survey research with cross sectional design. The study was conducted in the Umbulharjo Health Center I Yogyakarta in April 27th - June 28th. The subjects in this study were all third-trimester pregnant mothers who were willing to become respondents according to the criteria chosen with 46 respondents. Types of social support obtained from midwife include emotional, appreciation, instrumental, information, and social network. Data analysis in this study used uni-variable [19] and bi-variable analysis.

Seven categories of factors that affecting breastfeeding practices include [16]:

- Socio-demographic characteristics of mother and family.
- Structural and social support.
- Health and risk status of mothers and infants.
- Mothers' knowledge, attitudes and skills.
- Aspects of the feeding regime or practices.
- Health services (including hospital and health facilities) organization, policies, and practices.
- Socio-cultural, economic [20], [21], and environmental factors [16].

IV. RESULTS AND ANALYSIS

A. Characteristic of Respondent

Characteristics of 46 respondents based on the mother's age, parity, academic and work status of mother can be seen in Table 2. There are 4 respondents (8.69%) < 20 years old, 82.61% mother's age between 20-35 years old, and 8.69% mother's age > 35 years old. There are 35 respondents (76.09%) with parity 1-2 times and 11 respondents (23.91%) with parity 3-4 times.

TABLE II. CHARACTERISTICS OF RESPONDENTS IN HEALTH CENTER UMBULHARJO I YOGYAKARTA CITY

No.	Category	Frequency	Percentage (%)
1.	Mother age		
	a. < 20 years old	4	8.69
	b. 20-35 years old	38	82.61
	c. > 35 years old	4	8.69
	Total	46	100
2.	Parity		
	a. 1-2 times	35	76.09
	b. 3-4 times	11	23.91
	Total	46	100
3.	Academic		
	a. Junior high school	0	0
	b. Senior high school	39	84.78
	c. Higher education (DI-S2)	7	15.22
	Total	46	100
No.	Category	Frequency	Percentage (%)
4.	Job		
	a. Housewife	28	60.87
	b. Entrepreneur	7	15.22
	c. Laborer	3	6.52
	d. Private employees	4	8.69
	e. Civil servants	3	6.52
	f. Farmer	1	2.17
	Total	46	100
5.	Salary/month		
	a. < IDR 500,000	6	13.04
	b. IDR 600,000-1,000,000	20	43.48
	c. IDR 1,000,000-3,000,000	16	34.78
	d. > IDR 3,000,000	4	8.69
	Total	46	100

B. Factors Influence to Improve Exclusive Breastfeeding

Four factors that positively influence to improve exclusive breastfeeding are mother’s knowledge, age of maternal, counseling and education, and social support of midwives. Counseling can increase knowledge and attitudes of the pregnant women about exclusive breastfeeding. Types of social support obtained from midwife include emotional, appreciation, instrumental, information, and social network. The frequency distribution of midwife’s social support types during antenatal period from 46 respondents can be seen in Table 3. Frequency distribution of maternal choices for exclusive breastfeeding can be seen in Table 4.

TABLE III. FREQUENCY DISTRIBUTION OF MIDWIFE’S SOCIAL SUPPORT TYPES DURING ANTENATAL PERIOD

No.	Types of social support obtained from midwife	Category				Total	Percentage
		Positive		Negative			
		f	(%)	f	(%)	Σf	(%)
1.	Emotional	25	54.4	21	45.7	46	100
2.	Appreciation	24	52.2	22	47.8	46	100
3.	Instrumental	20	43.5	26	56.5	46	100
4.	Information	24	52.2	22	47.8	46	100
5.	Social network	21	45.7	25	54.4	46	100

Based on Table 3, the data shows that majority of respondents received emotional support as many as 25 mothers (54.4%). The least support obtained by respondents during the antenatal period was instrumental support as many as 20 mothers (43.5%) and social network support as many as 21 mothers (45.7%). “The modifiable factors that influence women’s breastfeeding decisions are breastfeeding intention, breastfeeding self-efficacy and social support. Existing midwifery breastfeeding promotion strategies often include social support but do not adequately address attempts to modify breastfeeding intention and self-efficacy” [22].

TABLE IV. FREQUENCY DISTRIBUTION OF MATERNAL CHOICES FOR EXCLUSIVE BREASTFEEDING

No.	Category	Frequency	Percentage (%)
1.	Giving the exclusive breastfeeding	26	56.5
2.	Not giving the exclu-sive breastfeeding	20	43.5
	Total	46	100

Based on Table 4 show that most mothers who plan to choose exclusive breastfeeding aged 0-6 months are 26 mothers (56.5%). Mother’s knowledge of exclusive breastfeeding has a relationship with the success of exclusive breastfeeding in infants. The results showed that there was a significant relationship between the level of knowledge of mothers about breastfeeding and exclusive breastfeeding. Therefore knowledge factors have an important role for a mother in taking actions to give exclusive breastfeeding to her baby [23].

One effort to improve the knowledge of exclusive breastfeeding is by counseling. Counseling can increase the knowledge and attitudes of pregnant women about exclusive breastfeeding [24]. Some media that can be used are teaching aids with counseling demonstration methods. The technique of providing counseling demonstration methods in health education is considered more capable and more effective in changing one’s knowledge or abilities [25]. Counseling with demonstration methods about breastfeeding was able to change

the level of ability of breastfeeding mothers in conducting breastfeeding techniques [23]. The influence of the demonstration counseling also affected the level of knowledge of the mother. This is because the demonstration method is considered to be more attractive and stimulates the spirit of mothers learning about exclusive breastfeeding [26]. Chandrashekar [27] stated that the rate of exclusive breastfeeding was higher in mothers who had breastfeeding early initiation. “Despite the higher rates of initiation and exclusive breastfeeding, practices such as pre-lacteal feeds and premature introduction of complementary feeds are of great concern in this urban population” [27].

Research related to the provision of education aimed at pregnant women to increase knowledge of breast milk is quite a lot done, while interventions that are usually carried out to increase maternal knowledge are using various methods and media, starting from the lecture method using media such as leaflets, videos, booklets, tools visual and support groups. Some studies suggest that more research is needed to identify methods and supporting facilities or media that can be used by pregnant women to support success breastfeeding [24], [28].

TABLE V. CROSS TABLE OF MIDWIFE'S SOCIAL SUPPORT IN THE ANTENATAL PERIOD FOR THE CHOICE OF MOTHERS GIVING EXCLUSIVE BREASTFEEDING

Midwife's social support	Mother choice						χ^2
	Yes		No				
	f	%	f	%	Σf	%	
Positive	19	67.9	9	32.1	28	100	0.02
Negative	6	33.3	12	66.7	18	100	
Total	25	54.3	21	45.7	46	100	

Based on Table 5, it can be seen that the majority of pregnant mothers who received positive social support from midwives planned to choose to give exclusive breastfeeding for babies aged 0 to 6 months as many as 19 mothers (67.9%) while pregnant mothers who received negative social support from midwives were more likely choose not to give exclusive breastfeeding for babies aged 0-6 months as many as 12 mothers (66.7%). To determine the effect of midwife's social support in the antenatal period on the choice of mothers to give exclusive breastfeeding, the results were obtained by Chi Square Test with a value of 0.02. This value of 0.02 shows a value of <0.05, so it can be concluded that there is an influence of midwife's social support in the antenatal period on the choice of mothers to give exclusive breastfeeding.

The prevalence ratio value is 2.1. The value of the prevalence ratio 2.1 shows that it belongs to the category of more than 1, and then the factors studied are of increased risk. This shows that negative social support from midwives in the antenatal period has 2 times more chance of influencing mothers not to plan giving exclusive breastfeeding to their babies at ages 0-6 months than those who receive positive social support from midwives. The Confidence Interval (CI) from 1.12 to 5.03, included in the category passing number one, can be concluded that the results of this study have a meaningful relationship.

The results of the study prove that midwife’s social support obtained during the antenatal period includes emotional support, appreciation, instrumental, information, and social

networks. The most support obtained by mothers is emotional support, while the support that is least obtained by mothers during the anti-social period is the support of social networks and followed by instrumental support. From the research obtained, most of the pregnant mothers who plan to give exclusive breastfeeding to their babies aged 0-6 months, but there are still 20 out of 46 pregnant mothers who plan not to give exclusive breastfeeding to their babies. One of the factors causing failure of exclusive breastfeeding is the lack of support from health professionals, especially birth attendants [29]. Midwife's social support in introducing about breastfeeding can begin since pregnancy occurs. Preparing pregnant women who will later breastfeed affects the success of breastfeeding. Education about the importance of breast milk must be obtained by every pregnant woman before birth occurs [30].

Based on the results of the bi-variable test on the influence of midwife’s social support in the antenatal period on the choice of mothers to give exclusive breastfeeding the results were 0.02, this figure shows that midwife's social support in the antenatal period affected the choice of mothers to give exclusive breastfeeding. Giving education and support at the time of antenatal have a positive relationship with breastfeeding in the breast and reduce the tendency to suckle with bottles [31]. The most influential interventions on the behaviour of exclusive breastfeeding are a combination of face to face intervention education, support and guidance in the antenatal period [22].

Based on the results of the calculation of prevalence ratios on midwives' social support in antenatal period towards the choice of mothers to give exclusive breastfeeding with the value 2.1, it could be concluded that the factors studied were increase the risk [32]-[34]. Negative social support from midwife in the antenatal period has 2 times more chance of influencing mothers not to plan to give exclusive breastfeeding for their babies at ages 0-6 months than those who receive positive social support from midwife. “Public health practitioners need to understand how local cultural practices influence early initiation of breastfeeding to promote adequate infant weight” [35]. “Breastfeeding counseling by midwives counselor of breastfeeding has not done well, socialization efforts not optimally, lack of human resources and inadequate support facilities” [36]. The average length of time working as breastfeeding counselor’s is 43.2 months [37].

Breastfeeding counseling including different Information, Education and Communication (IEC) materials like pamphlets, videos, pictures, discussion and all forms of counseling and peer groups support are considered as the appropriate method of breastfeeding counseling that enhance the breastfeeding outcome [38]. Midwives of breastfeeding counselors who work at the Public Health Centers have additional basic tasks and assignments which is very complex so it is not uncommon to experience difficulties in carrying out each of its tasks properly and has an impact on its performance that is not optimal [39].

V. CONCLUSION AND RECOMMENDATION

Four factors that positively influence to improve exclusive breastfeeding are mother’s knowledge, age of maternal, counseling and education, and social support of midwives. Mother’s knowledge about breastfeeding related with the provision of exclusive breastfeeding. Midwife’s social support obtained during the antenatal period includes emotional

support, appreciation, instrumental, information, and social networks. The most common social support is emotional. Most respondents plan to give exclusive breastfeeding for their babies. The influence of midwife's social support in the antenatal period on the choice of mothers to give exclusive breastfeeding was 0.02 with an alpha value of 0.05.

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