ORIGINAL RESEARCH

Analysis Of Intrinsic And Extrinsic Factors On Mother's Self-Efficacy In Giving Exclusive Breastfeeding In Puskesmas Tanah Kalikedinding Surabaya

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Abstract

Background: Self-efficacy is one of the factors that play a role in supporting the mother's success in giving exclusive breastfeeding (EBF). The low self-efficacy of the mothers can be influenced by intrinsic and extrinsic factors. For three years, the EBF rate in Puskesmas Tanah Kalikedinding Surabaya has not the target reached yet. Aim: This study was conducted to analyze the relationships between intrinsic and extrinsic factors of mother's self-efficacy in giving exclusive breastfeeding. Methods and Material: Analytic observational study was carried out with the design of cross sectional and quantitative approach. Sampling was done in Puskesmas Tanah Kalikedinding Surabaya by using consecutive sampling method. Interviews were conducted to 54 postpartum mothers by using questionnaires. The independent variables of the study were intrinsic factors including level of education, type

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of occupation and level of knowledge. Extrinsic factor consisted of the supports from the husband and health officers based on respondent's perception. The dependent variable was the rate of breastfeeding self-efficacy (BSE) of the mother. The analysis of quantitative data was done by using chi square test. Results: The results show that the majority of postpartum mothers had a high level of self-efficacy in providing EBF. There is a relationship between the mother's level of education with the mother's self-efficacy with p = 0.013. Mothers who did not work had higher level of self-efficacy than the working mothers. Mothers with medium and high levels of knowledge had high self-efficacy in giving EBF. However, low self-efficacy mothers were also found among the highly educated ones. The results also show that the low support from the husband was caused by his tendency of giving material supports. Besides, the home visit rate by the health officers only reached 13%. Conclusion: Level of education was the only one factor related to mother's selfefficacy in giving EBF in Puskesmas Tanah Kalikedinding Surabaya. Keywords: exclusive breastfeeding; mother; surabaya

Introduction

Globally, only 38% of infants worldwide get exclusive breastfeeding (EBF). Breastfeeding target of 2025 is expected to increase by 50% to meet the target of EBF coverage until the age of infants reaches 6 months (WHO, UNICEF, 2015). In Indonesia, the target that is proclaimed by the Ministry of Health is 80%. However, Indonesia has not been able to reach the target. Based on IDHS report in 2012, Indonesia reached 42% of

EBF coverage (MOH RI, 2015). Based on Provincial Health Service's report in 2013, Indonesia nationally reached its target with the rate of 54,3%, of which only 19 provinces were above average, and the highest rate was reached by West Nusa Tenggara at 79.7 % (INFODATIN, 2014).

Based on the data taken from the City Health Department, Surabaya has 62 *Puskesmas* (Community Health Center) with various rates of EBF coverage. Below is the result of the last three year trend (2012-2014) of the top 40 EBF coverage rated by average percentage in Surabaya city.

Table 1. shows the top 40 Puskesmas, put in order by the average percentages of EBF coverage, for the last 3 years. Puskesmas Tanah Kalikedinding was on the 39th rank with a coverage that did not reach the target (80%). With a further examination, it is found that EBF coverage of the Puskesmas decreased in 2013, and then it increased in 2014, but the increase was not significant enough.

In **table 2**, it can be seen that the EBF coverage in Puskesmas Tanah Kalikedinding Surabaya from 2012 to 2014 did not reach the target. Although the rates were not the lowest, but when compared with other Puskesmas, the achievements of EBF coverage in Puskesmas Tanah Kalikedinding Surabaya City tended not to equilibrate the yearly target increase, even they were still below the average rate of EBF coverage in the city.

Based on the fish bone analysis outcome of Puskesmas Tanah Kalikedinding, the low rate of EBF coverage was caused by several factors such as the mother's education level, knowledge, occupation, age, experience in breastfeeding, socio-cultural influence, family role, health officer's role, and availability of formula milk at the market. These could be grouped into extrinsic and intrinsic factors. In addition, according to a pediatrician of the Puskesmas, the reason of why average mothers failed to give EBF was because breast-milk did not come out after the infants were born. This caused the mothers to worry when the infants were not breastfed immediately, so that the mothers gave formula milk or other liquids to the infants for alternatives. This was possibly one of the responses given by the mothers who were unconfident with their ability to breastfeed.

Table 1.
Top EBF Coverage in Surabaya City in 2012-2014

		ibaya City in 2012-2014				
No	Name of Puskesmas	Average Percentages of EBF Coverage (2012-2014)				
		EDF Coverage (2012-2014)				
1	Sidomulyo	96				
2	Made	83,91				
3	Mojo	82,64				
4	Peneleh	81,87				
5	Wonokusumo	80,63				
6	Lontar	79,57				
7	Kedungdoro	78,18				
8	Gayungan	78,11				
9	Keputih	78				
10	Benowo	76,33				
11	Gununganyar	74,19				
12	Krembangan Sel	73,75				
13	Balas krumpik	70,55				
14	Jemursari	70,14				
15	Kebonsari	68,97				
16	Balongsari	68,89				
17	Tambak wedi	68,69				
18	Jagir	68,67				
19	Medokan Ayu	68,3				
20	Mulyorejo	68,03				
21	Pegirian	67,65				
22	Tambakrejo	66,65				
23	Wonokromo	65,15				
24	Kalijudan	63,94				
25	Menur	62,49				
26	Bangkingan	62,4				
27	Rangkah	62,07				
28	Sawahan	61,91				
29	Gading	61,43				
30	Kenjeran	60,64				
31	Kedururs	60,14				
32	Sidosermo	59,91				
33	Lidah Kulon	59,88				
34	Siwalankerto	59,26				
35	Tembok dukuh	58,93				
36	Ketabang	58,81				
37	Pacar Keling	57,55				
38	Sememi	57,11				
39	Tanah Kalikedinding	56,69				
40	Sidotopo	56,43				

Source: The City Health Department of Surabaya, 2012-2014

Table 2. EBF coverage in the working area of Puskesmas Tanah Kalikedinding in 2012-2014.

Year	Amount of I Infants (0-6		Delta (increment)			
	Amount	%	%			
2012	255	63,28%	11,45% (delta 2012 with			
2013	170	51,83%	2013); 3,12% (delta 2013 with 2014)			
2014	161	54,95%				

Source: The City Health Department of Surabaya, 2012-2014

The changing or emergence of a person's new behavior can be influenced by several factors such as the level of thinking, personal standards, emotion, and self-efficacy. According to Bandura (1997) in (Pajares, 2002), factors such as economic conditions, socioeconomic status, education level, and family do not directly affect someone's behavior (Zhang, 2005). The high or low self-efficacy of people varies. This is caused by several factors that influence individual's perception of ability to do something. These factors are age, sex, level of education, and experience (Bandura, 1997).

The purpose of this research is to know the results of analysis on relationship between intrinsic-and-extrinsic factors and mother's self-efficacy in giving EBF.

Methods

This study was quantitative, done by using observational analytic cross-sectional building design. This study was conducted by visiting the homes of postpartum mothers in the working area of Puskesmas Tanah Kalikedinding Surabaya. The study started from November 2015 to May 2016. The population was all postpartum mothers who lived in the area of Puskesmas Tanah Kalikedinding Surabaya.

To determine the samples, consecutive sampling technique was used, which was done by setting subjects that met certain criteria within a certain time, so that the number of respondents required was fulfilled. The inclusion criteria were postpartum mothers who lived in the working area of Puskesmas Tanah Kalikedinding for 6 months at least, were in good health, and were willing to be respondents. The exclusion criteria were the prospective respondents who could not read and write. As the result, 54 postpartum mothers contributed in the study as the respondents.

Primary data was obtained by interviewing respondents using questionnaires. Then, the questionnaires were examined by using validity and reliability tests. The measurement of respondent's self-efficacy levels was based on the current state of respondents (in a postpartum period) by exploring intrinsic and extrinsic factors. There were 37 questions that measured the mother's level of knowledge, the supports form of the husband and the health officer, and the self-

efficacy levels of the postpartum mothers. After all data was collected, it was described by using SPSS application and chi square test to see the relationship between extrinsic-and-intrinsic factors and the self-efficacy levels of postpartum mothers in giving EBF.

Results

The results of data examination were distributed into tables based on the determination of intrinsic and extrinsic factors.

The distribution of respondents based on education levels is shown in the following table.

Table 3.
Distribution of Respondents Based On
Education Levels

Last Education	Amount	Percentage
Graduated from SD (elementary school)/MI (Islamic based elementary school)	13	24,1 %
Graduated from SMP (junior high school)/MTs (Islamic based junior high school)	17	31,5 %
Graduated from SMA (high school)/ SMK (vocational high school)/MA (Islamic high school)	21	38,9 %
Graduated from University/Academy	3	5,6 %
Total	54	100 %

Education level shows how far the respondents got formal education from schools. Based on table 3, it can be seen that the majority of respondents, as many as 21 people (38.9%), were graduates of SMA/SMK/MA (high schools). While the least of respondents were graduates of University, which were only 3 people (5.6%). It indicates that the education level of respondents in the working area of Puskesmas Tanah Kalikedinding Surabaya was high enough.

The second intrinsic factor was the level of knowledge. The mother's levels of knowledge were determined by their ability in answering the given questions correctly.

Table 4.
Distribution of Respondents Based On Level of Knowledge

Question	Answer				A	
	True		False		Amount	
	N %		N	%	n	%
Definition of exclusive breastfeeding (EBF)	45	83,3 %	9	16,7%	54	100
Food for infants aged 0-6 months	51	94,4 %	3	5,6 %	54	100
Treatment for first- drop breast-milk	51	94,4%	3	5,6%	54	100
Health benefits of breastfeeding	22	40,7%	32	59,3 %	54	100
The right time to breastfeed	43	79,6%	11	20,4 %	54	100
Consequence of premature breastfeeding	48	88,9%	6	11,1 %	54	100
Factors influencing breast-milk production	20	37 %	34	63 %	54	100
The signs that breastfeeding is enough for the infants	32	59,3 %	22	40,7 %	54	100

Based on the observation of data in table 4, there were extreme results of the answer given by the mothers. Extreme in this context is when the true and the false answers are almost of the same amount, or when the false answers are of the higher amount than the true ones. First of all, about health benefits of breastfeeding, respondents who gave false answers (59.3%) were higher in number than those who could answer correctly (40.7%). About the right time to breastfeed, the correct answers only reached 79.6%. Furthermore, about the question of factors influencing breastmilk production, the correct answers only reached 37%. Finally, about the signs that breastfeeding is enough for the babies, only 59.3% of the respondents were able to answer correctly. According Notoatmodjo (2011), the measurement of knowledge assessment result can be classified into 3 categories. The "high" category is when the score falls within the range of 76% -100% of the maximum score, the "moderate" category is when it falls within the range of 75% -56%, and the "low" category is when it is <56% of the maximum score. The following is the distribution of mother's knowledge level.

The third intrinsic factor was the occupation of the respondents. Based on the collected data, it

was divided into housewife, private employee, civil servant (PNS) and teacher.

Table 5.
The job of the Respondents

Types of job	Amount	Percentage
Unemployed/Housewife	40	74,0 %
Private employee	12	22,2 %
Civil servant	1	1,9 %
Teacher	1	1,9 %
Total	54	100 %

It is known from table 5, the majority of respondents, that were as much as 40 people (74%), were a housewife (unemployed). While the least of respondents worked as teachers (1.9%) and civil servants (1.9%). The results of interview showed that most respondents chose not to work when entering the third trimester of pregnancy.

The extrinsic factors included supports of husband and health officer. The distribution below shows husband's support on breastfeeding.

In **table 6**, among the 10 statements, there 2 statements answered "yes" by all respondents. The two statements were about husband provided funds for respondent's examination, treatment, and nutrition during breastfeeding period and husband gave trust to respondent to take care of the infant and gave EBF to the infant. There were also 2 statements which percentages of "yes" and "no" were almost the same. Those statements were husband gave directions to respondent about the nice and proper way to breastfeed, in which 53.7% of the respondents said "yes" and the remaining 46.3% said "no"; and husband helped to prepare breastfeeding tools such as breast pump, in which 51.9% of the respondents said "yes" and the remaining 49.1% said "no". Then, based on tabulation results of husband's support score shown in table 6, the average score of husband's support to respondents was 1.80. Respondents with an average score equal to or above 1.80 were categorized as being highly supported by their husbands. While respondents whose with the average scores below 1.80 were categorized as getting low support from their husbands.

Table 6. Distribution of husband's supports

Forms of husband's		Yes		No	
support		%	N	%	age of N.
Husband reminded respondent to breastfeed the infant.	52	96,3	2	3,7	1,96
Husband helped to search for information about the importance of EBF and about the proper way to breastfeed.	38	70,4	16	29,6	1,70
Husband suggested to give the first drop breast milk (colostrum) to the infant.	40	74,1	14	25,9	1,74
Husband complimented respondent for breastfeeding the infant.	40	74,1	14	25,9	1,74
Husband gave directions to respondent about the nice and proper way to breastfeed.	29	53,7	25	46,3	1,53
Husband helped to prepare breastfeeding tools such as breast pump.	28	51,9	26	48,1	1,51
Husband provided funds for respondent's examination, treatment, and nutrition during breastfeeding period.	54	100	0	0	2
Husband gave trust to respondent to take care of the infant and gave EBF to the infant.	54	100	0	0	2
Husband helped respondent to take care of the infant when waking up at night.	51	94,4	3	5,6	1,94
Husband communicated with respondent and the infant during breastfeeding.	50	92,6	4	7,4	1,92
Average			1,80		

Table 7.
Distribution of health officer's Supports

Forms of health	Yes		No		Avera	
officer's support	N	%	n	%	ge of N	
Informed the mothers about appropriate foods for the newborns.	39	72,2 %	15	27,8 %	1,72	
Encouraged the mothers to do Early Initiation of Breastfeeding (IMD).	47	87%	7	13%	1,87	
Informed the mothers about EBF.	52	96,3 %	2	3,7%	1,96	
Informed the mothers about the right time to give additional food to the infants.	46	85,2 %	8	14,8 %	1,85	
Conducted visits to the homes of postpartum mothers	7	13%	47	87%	1,12	
Average	1,70					

The second extrinsic factor was the support of health officers. health officer's support in mother's perception described the actions of health officer in improving the mother's self-efficacy in giving exclusive breastfeeding.

Table 7 shows that the majority of respondents stated "yes" for four statements of health officer's supports perceived by the respondents. Only for the 5th statement, most respondents (87%) stated that health officers did not make home visits to give guidance for EBF. Only 13% of respondents stated that they got the home visits. The average score of 1.70 became the standard that determined the high or low support of the officers. Officer's support was defined as high when it reached the score of ≥1,70.

Breastfeeding Self-Efficacy (BSE) is a mother's confidence in ability to perform exclusive breastfeeding. Results of the study show that 28 respondents (51.9%) were on the high level of BSE. It was only differentiated by 1 respondent to the group with low level of BSE.

Below is the distribution of correlation between respondent's last education and their BSE rates. Most of the respondents (42.6%) were senior high school (SMA) graduates. While respondents graduated from university were the least in number (5.6%).

Table 8.
Correlations between Respondent's Last
Education and BSE Rate

Level of Last	Breastfeeding Self-Efficacy (BSE)				Total	
Education		Low	High			
	n	%	n	%	n	%
Elementary	1	1.00/	1	18,5	1	20,4
School (SD)	1	1,9%	0	%	1	%
Junior High School (SMP)	9	16,7%	8	14,8	1 7	31,5 %
Senior High School (SMA)	13	24,1%	1 0	18,5 %	2 3	42,6 %
University	3	5,6%	0	0%	3	5,6%
Total	26	48,1%	2 8	51,9 %	5 4	100 %

Table 8 shows the analysis results of Chi square statistical test, that p=0.013. Because p<0.05 was significant, it can be concluded that there was a relationship between level of

education and BSE rate in the working area Puskesmas Tanah Kalikedinding, Surabaya.

Discussion

The mothers with high BSE were mostly high school graduates. The result of statistical test shows that there was a correlation between the mother's last education and BSE. It is supported by Padranie's (2015) study which showed that levels of education were related to BSE. This is because level of education can show how often the mother exposed by knowledge and information either directly or indirectly. Mothers with upper secondary educations could seek information about nursing and nutrition for the infants such as breast-milk. So, level of education can be one indicator of how fast or slow the mothers find the information. It is also stated by another researcher. Denis (2006), that women with higher education have a high BSE score as well. Someone with education has the advantage higher understanding and digesting information obtained from the environment. With the information will be easily absorbed and improve the mother's knowledge, especially related to feeding the infants. In the end, the mothers can be encouraged to give EBF to the infants.

Furthermore, related to the analysis on correlations between occupation and BSE value, according to Ariani, Sitorus and Gayatri (2012), the variable of socioeconomic status (occupation) was related to self-efficacy. This is because occupational status is related to someone's actualization and can encourage someone to be more confident and responsible with a given task. Mothers who did not work had more time to interact with their children. Oktara (2013) also stated that working mothers often find it difficult to spend their time for giving EBF to the infants. While related to the last intrinsic factor, that is the mother's level of knowledge, according to Notoatmodjo (2012), level of knowledge or cognitive ability is a very important dominant in the formation of someone's behavior. Someone's level of knowledge can be influenced by age, education, work, environment, and socio-cultural factors. The study shows that mothers with moderate and high levels of knowledge had higher levels of self-efficacy than those with low selfefficacy. Lacking of knowledge about the benefits of EBF could decrease the mother's confidence in giving EBF. However, the study shows that there was no correlation between level of knowledge and the self-efficacy of the mothers.

This is different from the result of previous research conducted by Muyassaroh, Nurhayati and Fitria (2014), which stated that there was a correlation between self-efficacy and mother's knowledge level in treating burns in children. The higher the level of knowledge, the wider the uptake of information obtained. This could make the mothers more confident in doing a job. The results of Herawati's (2015) research also proved that there was a significant relationship between level of knowledge and self-efficacy in the group of Tuberculosis patients. It was proved that level of knowledge could encourage patients to be obedient in taking their medicines. While this research did not find such relationship because of the different target group taken in this study, so that the characteristics of respondent can be one of the factors determining the presence or absence of relationship in a study.

The first extrinsic factor in this research was husband's supports. Husband's support is an act that expresses the level of awareness to the wife during childbirth as an effort to support mother's self-efficacy in giving EBF. The results of this show that, in Puskesmas study Tanah Kalikedinding area, the support given by husbands to the wives in their postpartum period was still relatively low. This could be caused by several factors such as inherited culture. respondents admitted that breastfeeding is the wife's matter. Not many husbands knew about the appropriate way to do breastfeeding. It is proven that only as much as 53.7% of the mothers who answered "yes" got directions from the husbands about how to breastfeed. The results of chi square test used in this research show no relationship between husband's support and mother's selfefficacy level. This result is in line with previous research conducted by Febrina (2014) which stated that the lower the family support can make the quicker the mother stopped breastfeeding. Family support does not give significant effect on EBF. This was because the supports from husband and family were more likely in the form of material support rather than mental support. This opinion was in line with the results, that 100% of mothers stated "yes" that their husbands played a role in

providing funds for examination, treatment and so on in the process of nutritional fulfillment of breastfeeding mothers.

The second intrinsic factor also did not show any relationship between health officer's support and BSE value. Based on the results of this research, 63% of the total respondents got high support from the health officers. The supports were in the forms of guidance on breastfeeding, information about exclusive breastfeeding, and visits to the homes of postpartum mothers. However, as much as 87% of respondents stated that they did not get any home visit after giving birth. Based on the analysis of information given by the respondents, it is found that mothers who did not get the home visits by local health officers in average were those who gave birth at the hospital. The majority of mothers who got the home visits were those who gave birth at local midwife clinics, while the visits given by the Puskesmas were still rarely done. Because of this condition, the mothers became uninformed about several things to be considered in their postpartum period. During a home visit, the mothers could consult with the health officers about breastfeeding problems they experienced. This activity was expected to increase the mother's confidence to keep breastfeeding until the baby reached 6 month old. This statement is supported by the research conducted by Bate et.al. (2013), which also proves that the role of health officers, especially the breastfeeding counselors who give counseling to the mothers during pregnancy and to the time of childbirth, is very important. Some information such as about breast treatment and EBF can increase the mother's confidence about the breast-milk they produce. Some mothers said that they did not get deep explanations from the breastfeeding counselors. The officers gave counselings, but some things from the posters and brochures they used were not explained in detail. This made the mothers difficult to remember what was explained by the officers, especially for those who had low education.

The absence of correlation between health officer's support and self-efficacy in this research could be due to the lack of meeting intensity between postpartum mothers with health officers, thereby allowing the maternal information to be incomplete. This caused the mothers become less confident in giving EBF to the infants.

Conclusion

Based on the results of statistical tests, it is found that only one variable was related to the value of respondent's self-efficacy, that is the education level of the respondents. The remaining variables of occupation, knowledge level, husband's support and health officer's support did not show any indication of relationship.

Conflict of Interest

There is no conflict of interest in this manuscript.

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