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Factors Influenced the Administration of Colostrum among Mothers with Post-Sectio Caesarean in Bunda Thamrin Hospital, Medan

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Abstract. Colostrum is milk that is secreted by the breast of the mother first after giving birth. This study aimed to analyze the factors that influenced the administration of colostrum among mothers with a post-sectio cesarean. An analytic survey with a cross-sectional design was applied in this study. The data analysis method used in this study uses a multiple logistic regression statistical test. The population in this study were all postpartum mothers who had birth by cesarean sectio procedure. One hundred samples were selected by accidenta sampling technique. The results showed that the administration of colostrum among mothers with post sectio cesarean were 75%, The initiation o breastfeeding was 62%, of them have lack knowledge, the support of majority husbands is more petite that is 82%, the role of the majority of health workers is less by 51%. Multivariate test results obtained the probability of a husband's suppor variable (p = 0.0001) and the role of health workers (p = 0.038) likely to cause post-section cesarean mothers not to give colostrum by 96 percent, while 4 percent is due to other factors.

Keywords: Colostrum, post section cesarean mothers

INTRODUCTION

Weaned or colostrum is the milk secreted by the mother's breast was the first postnatal form of a liquid with a yellowish color with a thick consistency compared to milk production after the milk colostrum. The process of producing colostrum occurs during pregnancy until four or seven days postpartum. The first breast milk contains high immunoglobulin A (IgA) function as passive immunity in infants. Colostrum is also become a source of natural cleaning your baby's digestive tract, newly born of meconium (1).

The World Health Organization recommends exclusive breastfeeding in the first 180 days (24 weeks) of life. When the baby is 24 weeks old, it has been introduced with a source of nutrients that include fruits and vegetables are processed according to the digestibility baby aimed nutritional requirements and breastfeeding until a baby steps on the age of two years (2). The risk of loss of life due to diarrhea in infants who are not exclusively breastfed is 3.94 times higher when compared to infants who only receive breast milk from 0 to 24 weeks. United States of America (USA), the mortality rate at four weeks of infant age has decreased by 21 percent in infants who are only breastfed (1).

The number of deaths in infants includes indicators of the health development plan of the RPJMN from 2015 to 2019 and *SDGs.* According to the IDHS data, the number of infant deaths is decreasing each year (decreasing). For example, in the 2012 Indonesia Demographic and Health Survey (IDHS), 32/1,000 KH mortality rate in infants. While the data from SUPAS 2015 decreased the mortality rate in infants by 22.23/1000 live births (KH) (3).

The cause of high infant mortality rates is due to some health problems due to infection, such as high fever, diarrhea, and acute respiratory infections (ARI). To overcome the high infant mortality rate due to this infectious disease is through exclusive breastfeeding. Begins with the provision of colostrum, which protects infants against various infections through passive immune content that is high in it.

The government is consistent in guaranteeing to breastfeed babies. The issuance of the latest regulations in government regulation (*PP*) No. 33 of 2012, set on March 01st, 2012, includes ten chapters and 43 articles, which more fully regulate exclusive breastfeeding. Exclusive breastfeeding is mandatory for both vaginal delivery mothers and sectio Caesarea (4). However, based on Riskesdas 2013 data, BBL given breast milk in the first hour of life in vaginal delivery and through sectio Caesarea surgery in Indonesia was 34.5 percent (5). Some factors influence breastfeeding, namely maternal, infant, social support, and other factors.

Maternal factors, one of which is mothers who have Sectio Caesarea. Riskesdas reported that the number of deliveries by section Caesarea increased from 6.8 percent in 2007 to 9.8 percent in 2013 (6). The results showed decreased colostrum (stage 1 breast milk) in women with section Caesarea in Indonesia. Based on the Indonesia Demographic and Health Survey results in 1997, only 8 percent of babies received colostrum, while in 2002, there was a decline of 3.7 percent (7). Whereas breastfeeding in the first hour (colostrum) in 2007 was 44 percent (8).

Riskesdas (2010) found that the percentage of maternal behavior in Indonesia that discards colostrum partially or wholly is 25.3 percent. A higher figure was found for the North Sumatra region, amounting to 28.2 percent (9). Apriani's results (2013) Factors of breastfeeding mothers in giving colostrum to newborns in Polonia Sub-district, Medan Polonia Subdistrict are intrinsic motivational factors based on the needs of 32 people (100%), based on the expectations of 32 people (100%), and based on interests as many as 23 people (71.9%). Extrinsic motivation factors based on family support as many as 32 people (100%), based on the environment as many as 25 people (78.1%) (9).

Producing colostrum or onset of milk removal is also closely related to the delivery method. Research Hadianti and Resmana (2016) that the method of giving birth through Sectio

Caesarea requires more time in removing colostrum to more than 120 minutes. Namely with a result of 1.75 with (p = 0.031; 95% CI; 1.028-2, 981) (10). Khosidah (2016) stated in his research that there is an influence of knowledge of BBL mothers with (p = 0.020), some mother children (p = 0.007), and the role of health workers (p = 0.013) on the administration of colostrum on LBW (11).

The success of exclusive breastfeeding is closely related to the support given to mothers by their immediate family, especially their husbands. A mother's motivation in providing exclusive breastfeeding until the baby is 24 weeks old depends on how support is given. Both the support psychologically and other forms of support in terms of helping mothers of infants get quality, provision of nutritional support for breastfeeding. The support of a husband as a breastfeeding father (ASI father) in particular will directly impact the psychological and physical condition of the mother in the process of breastfeeding. As the head of the household who takes the role of the father of ASI, the husband will help determine the best decision for his family. If other families think throwing the first ASI out is natural, the husband can better understand. And especially the husband is also involved in taking care of the baby. Unfortunately, the husband who took part in the successful breastfeeding process, especially how to give colostrum, exclusive breastfeeding, and BBL care, is still rarely found (12).

Breast crawl is very important for the closeness of mother and baby and the success of the breastfeeding process in the future through skin contact in the first hour after delivery. Babies are given the opportunity to breast crawl be more quickly obtain colostrum than babies who did not earn a chance. However, according to the 2013 RISKESDAS, only 34.5 percent had an IMD less than one hour after delivery, and there was 13 percent of mothers who breastfed for less than 48 hours. Breastfeeding in the first hour of birth cannot be done by mothers who have problems with a delivery, especially in women with a section caesarian (12).

Mothers' condition post section Caesarea requires support from health workers by showing the baby to the mother and giving the baby to breastfeed immediately to get colostrum. The results of research by Wulandari (2014) stated that the low practice of breastfeeding, especially colostrum, has to do with health workers and the practice of joining care (13).

OBJECTIVE

The study aimed to analyze the factors that influenced the administration of colostrum among mothers with post-sectio in Bunda Thamrin Hospital Medan.

METHOD

This study was conducted with a quantitative method with cross-sectional approaches. The samples were postpartum mothers who gave birth to the section Caesarea method at Bunda Thamrin Hospital Medan. The population in this study were all postpartum mothers who gave birth by sectio Caesarea method at Bunda Thamrin Hospital Medan. One hundred samples were taken through the accidental sampling technique from Bunda Thamrin Hospital Medan.

The instrument used in this study was a self-generated questionnaire which was divided into three parts. The first part is a post-section cesarean maternal demographic data questionnaire, which includes age, education, occupation, parity, an indication of cesarean section, previous birth history, and time of delivery. Second, a questionnaire containing questions about maternal knowledge consisted of 10 questions. The husband's support consisted of 10 questions, breast crawl consisted of 2 answers, yes or no, and the role of health workers consisted of 10 questions. Third, a questionnaire about giving colostrum to post sectio cesarean mothers. A validity and reliability test to questionnaire has been conducted on 30 respondents

with the same criteria. The dependent variable in this study was the administration of colostrum in post-section cesarean mothers in Bunda Thamrin Hospital Medan. The independent variables are early breastfeeding, mother's knowledge, husband's support, and the role of health workers.

Retrieval of research data is done after obtaining permission from the hospital, then the respondents were explained about the purpose of the study. Informed consent was given to the respondents before conducted interviews guided by the questionnaire respondents. The data were then processed using the computer program SPSS using univariate, bivariate, and logistic regression.

In order to protect the respondents' rights, this research has been reviewed by the ethical committee and was conducted with the approval of the Ethics Committee of the Faculty of Public Health at the University of North Sumatera in September 2019. The certificate number ethics approval letter was 6971/UN5.2.1.10/KRK/2019.

RESULTS

The study was conducted in October 2019 in Bunda Thamrin's hospital Medan Indonesia. One hundred postpartum mothers who gave birth by cesarean section delivery were involved. The results of data collection were analyzed using univariate analysis and bivariate analysis.

Characteristics of Respondents

Table 1. Characteristics of Respondents by Age, Education, Occupation, and Parity

Characteristics	(n)	Percentage (%)
Age		
20-35	68	68
>35	32	32
Amount	**100**	**100**
Education		
Low	24	24
High	76	76
Amount	**100**	**100**
Profession		
Housewife	34	34
Farmers	9	9
Entrepreneur	22	22
Trader	26	26
Civil Servants	9	9
Amount	**100**	**100**
Parity		
≤2 people	53	53
>2 people	47	47
Amount	**100**	**100**

Table 1 described the characteristic of respondents based on age, education, occupation, and parity. The results found that most respondents were 20-35 years old, regarding the education level, 76% of them graduated from higher education and worked as the motherhouse 34%. In addition, more than half of respondents have children ≤ 2 (53%).

Relationship between early breastfeeding, knowledge, husband's support, and role of health workers with the provision of colostrum to post sectio cesarean mothers

Table 2. Relationship between the early breastfeeding, knowledge, husband's support, and role of health workers with the provision of colostrum to post sectio cesarean mothers

Independent Variable	Colostrum				Total		P
	No		Yes				
	N	%	N	%	n	%	
Early Breastfeeding							
No	25	65.8	13	34.2	38	100	0.096
Yes	50	80.6	12	19.4	62	100	
Knowledge							
Less	47	81.0	11	19.0	58	100	0.101
Well	28	66.7	14	33.3	42	100	
Husband's Support							
Less	74	90.2	8	9.8	82	100	0.0001
Well	1	5.6	17	94.4	18	100	
The Role of Health Workers							
Less	49	96.1	2	3.9	51	100	0.038
Well	26	53.1	23	46.9	49	100	

Table 2 described the relationship between the early breastfeeding, knowledge, husband's support, and role of health workers with the provision of colostrum among post sectio cesarean mothers at Bunda Thamrin Hospital Medan in 2019. The results showed no relationship between early initiation of breastfeeding and the provision of colostrum (p= 0.096; p>0.05). The results also found no association between knowledge and colostrum administration (p=0.101; p>0.05). However, a positive relationship was found between the husband's support and the provision of colostrum (p = 0.0001; p=0.05). It was also consistent between the role of health workers and the provision of colostrum (p= 0.038).

Final Results Multivariate Analysis

Table 3. Multivariate Analysis Results using Multiple Regression Logistic Test

Variable	B Value	P-Value	Exp B Value	95% CI	
				Lower	Upper
Husband's Support	4.260	0.0001	70.833	7.811	642.375
The Role Of Health Workers	1.772	0.038	5.880	1.106	31.274
Constant	-3.199	-	-		

The factors of husband support and the role of health workers that influenced the administration of colostrum among mothers with post-sectio cesarean can be seen in Table 3. The data show no significant effect between the support of her husband (p = 0.0001) and the role of health care workers (p = 0.038) on giving colostrum among *post sectio cesarean* mothers.

DISCUSSION

Characteristics Of Respondents on Giving Colostrum

Giving colostrum to Post Sectio Caesarea mothers at Bunda Thamrin Hospital mainly was done by mothers with the characteristics of> 35 years old, had a high education level, and most jobs were housewives and had parity> 2 people. This is related to the characteristics of the respondents who determine the practice of giving colostrum to babies.

The results of this study are in line with Khosidah's research (2016), which states that there is an effect of parity of newborn mothers on giving colostrum to newborns at Baturaden Community Health Center Banyumas Regency in 2016 ($p = 0.007$) (13). This study is also in line with the results of research by Maita (2015), which states that the mother's age is related to giving colostrum p-value $0.024 \leq 0.05$, parity is related to giving colostrum p-value $0.000 \leq 0.05$, and education is related to giving colostrum p-value. $0.021 \leq 0.05$ (14).

The Effect of Early Breastfeeding on Colostrum Giving to Post-Sectio Caesarean Mothers

The multiple logistic regression test results for the relationship between Early Initiation of Breastfeeding and colostrum administration obtained a p-value of 0.096, which means that there is no relationship between Early Initiation of Breastfeeding and colostrum administration. Therefore, early Initiation of Breastfeeding at delivery by cesarean section becomes the SOP of Bunda Thamrin Hospital. However, the research results in the field showed no relationship between Early Initiation of Breastfeeding and colostrum administration. This happens because of the implementation of early breastfeeding initiation at delivery by cesarean section. On average, the baby is placed on the mother's chest only lasts for 5 minutes, one of which is the cold operating room conditions, so it is feared that the baby will experience hypothermia. Meanwhile, determining the baby's success in finding the mother's nipple is if the maximum Early Initiation of Breastfeeding time is done. On average, babies take more than the first 60 minutes to arrive and suckle on the mother's nipple after it is placed on the mother's chest.

Khoniasari (2015) stated that efforts to increase the success of giving colostrum are through the implementation of Early Initiation of Breastfeeding by newborns to their mothers. Early breastfeeding initiation is a baby who starts breastfeeding himself immediately after birth, where the baby is left to look for its mother's nipple (not offered to the nipple) (15).

The Effect of Knowledge on Giving Colostrum to Post-Sectio Caesarean Mothers

The multiple logistic regression test results for the relationship between knowledge and colostrum administration obtained a p-value of 0.101 which means that there is no effect between knowledge and colostrum administration. Therefore, the results of this study stated that there was no influence between knowledge on colostrum administration. Based on the results of interviews, both mothers with suitable expertise and mothers with less understanding about colostrum at Bunda Thamrin Hospital did not focus on giving colostrum immediately to babies for various reasons. Including the general condition of post-SC mothers who are weak, breastmilk that does not come out so that providing formula milk products is an alternative and is common in babies born through the SC method.

The level of knowledge has a significant contribution in changing a person's behavior to do something. For example, sufficient knowledge about breastfeeding will influence breastfeeding success, in this case, the provision of colostrum to newborns. Meanwhile, Wulandari's research (2014) found no relationship between maternal age, parity status, knowledge, and attitudes of mothers about the importance of breastfeeding and early breastfeeding practice on the first day of post-section Caesarea (15). The results showed that all mothers had good knowledge about breastfeeding, 26.4% of them had previous experience in

breastfeeding, but only 6.9% and 29.2% started breastfeeding on the first and second day after sectio Caesarea in RS (15).

The results of this study are not in line with research by Khosidah (2016), which shows that there is an effect of maternal knowledge about colostrum on giving colostrum to newborns with a value of p = 0.020 (11).

The Effect of Husband's Support on Giving Colostrum to Post-Sectio Caesarean Mothers

The multiple logistic regression test for the relationship between husband's support and colostrum giving obtained a p-value of 0.002. Thus, it was indicated an association between husband's support and colostrum administration at Bunda Thamrin Hospital Medan. From the study results, it can be seen that respondents and husbands who are well informed and educated about the importance of giving colostrum will be encouraged to maximize breastfeeding, especially during IMD. It also refuses to provide formula milk to their babies compared to those who have never received information or support from their families. Therefore, family support, especially husbands, will significantly influence the provision of colostrum to post-SC mothers.

In line with Maita's (2015) research, it shows a relationship between family support and the provision of colostrum to postpartum mothers in Camar I Room Arifin Achmad Hospital, Riau Province, in 2013 a value of p = 0.000 (14).

The Role of Health Workers on Giving Colostrum to Post-Sectio Caesarean Mothers

The multiple logistic regression test results for the relationship between the role of health workers and the provision of colostrum obtained a p-value of 0.038 which means that there is a relationship between the part of health workers and the provision of colostrum at Bunda Thamrin Hospital Medan. This can be seen from the results of interviews obtained from respondents who answered that when the mother performed ANC did not explain the importance of oxytocin massage to accelerate the release of colostrum as many as 82 people. In contrast, the interviews that were obtained directly by most mothers answered yes were health workers helping mothers to mobilize. Early postoperative so that the mother can immediately give the first milk out (colostrum) to as many as 97 people. Therefore, it is hoped that the role of health workers will be more effective and efficient in providing information about the importance of giving colostrum.

After completion of delivery, the health worker can explain the importance of mother babies to give colostrum immediately. Health workers have a significant role in helping with childbirth. Colostrum administration can be done through the early initiation of breastfeeding. The implementation of IMD after the SC procedure is carried out for a maximum of 5 minutes, while the time it takes for the baby to find the mother's nipple is, on average, above 60 minutes at the time of IMD. Meanwhile, the questionnaire results for the role of officers in health facilities when the mother performed ANC during pregnancy also did not explain the importance of giving colostrum, especially when the mother gave birth through the SC method.

The results of this study are in line with Khosidah's research (2016) which shows that there is an influence on the role of health workers in giving colostrum to newborns on giving colostrum to newborns with a value of p = 0.013 (14). Wulandari (2014) The correlation test found that the support of health personnel and inpatient conditions were factors related to the practice of breastfeeding (p-value = 0.39; p = 0.001; p-value = 0.47; p = 0.001). Low maternal breastfeeding after cesarean section correlates with low support for health professionals and delayed admission (13).

ONCLUSION

The analysis of factors that influence the administration of colostrum among mothers with post sectio cesarean found that the factors of husband support and the role of health workers influence the administration of colostrum to post sectio cesarean mothers. It is hoped that the health workers will try to provide information or participate in educating husbands about giving colostrum to give colostrum to newborns for subsequent pregnancies. It needs family participation, especially husband and community roles, and increasing self-awareness to seek information about the provision of colostrum.

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