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PERCEIVED INSUFFICIENT MILK (PIM) AMONG MOTHERS OF 0-6 MONTHS INFANTS IN CIPAYUNG HEALTH CENTRE, DEPOK INDONESIA: A QUALITATIVE STUDY

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ABSTRACT

Background: Exclusive breastfeeding is breast milk given to infant since their birth to the age of 6 (six) months, without adding and/or replacing with other foods or beverages (except medicines, vitamins, and minerals). One of the factors that affect the exclusive breastfeeding was the perceptions of insufficient milk. Milk insufficiency is considered to happen when the mother stops breastfeeding exclusively with some reasons such as no breast milk, low milk supply, or insufficient milk. This research was to examine more deeply the perception of insufficient milk and factor influencing it.

Methods: This was a qualitative study that used a primary data of study "Intervention of Breastfeeding Enhancement and Weaning Food in the Implementation of the First-1000-Days-of-Life Program". Informants selected through who has been intervened research by PKGK. Triangulation of data sources was a midwife, informants' husbands, documents of mother and child health books (MCH) and secondary data from PKGK research.

Results: Based on the result from the interview: a) there was found a tendency of knowledge increase on mothers receiving treatment. b) Mostly, the lactation guidance was given without supporting device. c) Mother perception about their will gained weight if giving the sufficient milk has not been in line with Body Mass Index (BMI) before pregnancy. d). Family support towards mothers breastfeeding has not been provided optimally. e) Early breast-feeding (EBF) was not complete in accordance with the standard.

Conclusions: Mothers who had not received treatment were having lack of knowledge on exclusive breastfeeding. Implementation of EBF was not in line with the procedure. The role of a delivery helper on EBF is vital in order to make the implementation of the EBF carried out according to the procedure.

Keywords: Exclusive Breastfeeding, Perception of Insufficient Milk, Early Breastfeeding

INTRODUCTION

Breast milk is the best nutrition for babies since it contains the most appropriate nutrients for infants' growth and development. The presence of the appropriate protective, nutrient factors in breast milk can ensure the quality of nutritional status, as well as decrease the morbidity and the mortality in children [1]. Exclusive breast milk is breast milk given to infants since their birth to the age of 6 (six) months, without adding and replacing with other foods or beverages (except medicines, vitamins, and minerals) [2]. Breast milk contains antibodies that can protect infants from high-risk diseases such as diarrhea, respiratory infection, and pneumonia. Exclusive breastfeeding can reduce the risk of allergies in infants. This is because at that age, infants digestive system is not ready to accept what contained in foods so it can cause an immune reaction and allergies [3].

According to The State of the World's Children 2017, which released by United Nations International Children's Fund (UNICEF) in early 2018, the percentage of babies with less than six months who breastfed by mothers in only 40%. Otherwise, the percentage in East Asia and the Pacific is 28% which is lower than in South Asia (52%) [4]. In Indonesia, the percentage of babies with exclusive breastfeeding less than six months is 54% and this target still far from the national target of exclusive breastfeeding 80% [5]. Based on Indonesia Health Profil 2016, West Java Province has 39.6% six-month exclusive breastfeeding. Then, Depok City still has under a half, there is 41.9%, and this percentage has decreased 23.9% every year from 2013 to 2016. Noted that the prevalence of infants aged 0-6 months exclusively breastfed by 2015 was 39% [6]. This case may influence the perception of insufficient milk. Several factors affect the exclusive breastfeeding. Based on the qualitative study conducted by Fikawati and Syafiq, maternal education, knowledge, and experience were some predisposing factors having a positive effect on exclusive breastfeeding success. Early initiation of breastfeeding has been a robust enabling factor for exclusive breastfeeding success. Regarding the reinforcing factors, the support of health workers was most markedly influencing in the exclusive success of breast milk [7].

One of the factors that affect the exclusive breastfeeding was the perceptions of insufficient milk. Milk insufficiency is considered to occur if the mother stops breastfeeding exclusively on the for the reasons such as no breast milk, low milk supply, or insufficient milk [8]. The large percentage of women's perception of Perceived Insufficient Milk was reported as the most common problem in breastfeeding. This was the major reason for mothers to stop breastfeeding at an early age. The exact prevalence of perceived breastfeeding insufficiency has not been known (estimated between 30-80% of breastfeeding mothers). However, many researchers concluded that the perceived *milk insufficiency* was the reason why the mothers provided additional food earlier to their babies [9].

A result was found based on the research "Intervention of Breastfeeding Enhancement and Weaning Food in the Implementation of the First-1000-Days-of-Life Program", a cooperated study between Public Health Nutrition (PKGK) Faculty of Public Health University of Indonesia with Ministry of Health at Health Center of Cipayung. There were 169 breastfeeding mothers as the sample in the study. 122 mothers successfully provided exclusive breastfeeding. 47 mothers failed to provide exclusive breastfeeding. Previous research by PKGK showed that 68,1% of the respondents had not complied the exclusive breastfeeding scheme influenced by the perception of insufficient milk. The sample was divided into four groups. Group 1 was given milk; Group 2 was reminded by cadres every one week; Group 3 was reminded via short message service (SMS) and Group 4 was as a control group. The experimental group received an education on 6-month exclusive breastfeeding, lactation nutritional and anthropometric measurements. Meanwhile, in the control group, only anthropometric measurements were performed. This study found that most of the failing (32 mothers failed) in providing exclusive breastfeeding was caused by milk insufficiency. Since the percentage is quite high, it is imperative to further the study with the question of what they have such perception. Therefore, the authors were interested in examining more deeply by using the qualitative approach, on the perception of insufficient milk among mothers were given treatment and who were not and factor influencing it.

METHOD

This research was conducted by using qualitative research method, which aimed to gain understanding a phenomenon through the inductive thinking process, so the researchers could understand the subject and could feel what they experienced in their daily life [10]. This was a qualitative study that used a primary data of study "Intervention of Breastfeeding Enhancement and Weaning Food in the Implementation of the First-1000-Days-of-Life Program". Informants selected through who has been intervened research by PKGK. The concept of sample selection in qualitative research considered the suitability, adequacy, and saturation. The next sample selection were based on nine inclusion criteria: 3 mothers who failed to give exclusive breastfeeding for milk insufficiency with receiving the treatment, three mothers who failed to give exclusive breastfeeding for of milk insufficiency without treatment.

Triangulation of data sources was performed by using key informants (1 midwife and two informants' husbands), documents of mother and child health books (MCH) and secondary data from PKGK research. The study was conducted in April 2018 in the working area of the Health Center of Cipayung Depok, West Java. Data analysis was done by using interaction analysis model, in which data reduction and data presentation were done simultaneously during the data collection process. The results of the field research were as raw materials which then were summarized, reduced, and then arranged systematically. The data then were categorized into the form of matrices. It was followed by conducting an analysis before the researchers finally draw conclusions from this study.

RESULTS

Description of Perceived Insufficiency Milk

The following are results of in-depth interviews of 3 informants who received treatment and three informants who were not treated. All informants (6 people) said that they failed to give exclusive breastfeeding because they assumed that they had had less breast milk and had stopped producing the milk.. *"I am still giving breast milk. The baby caretaker gave SGM (brand of infant milk-Transt.), maybe because she saw my baby was hungry....."* (P2). *"I still provide breast milk. However, I use a pump, because it took a long time to produce it, and only little (milk) produced. I feel pity for her waiting for the milk..."* (P4). One of the three informants who was treated, had a perception of insufficient milk affected by cesarean birth. The informant felt the postoperative pain making her difficult to breastfeed, so then she gave infant formula. This statement is in accordance with the theory disclosed by Worthington-Roberts, that the milk insufficiency supply is the mother's perception of the quantity of her breast milk not meeting the needs of the baby's weight, seen from baby's fussiness, baby's crying after breastfeeding, and poor baby's weight gain [11]. So the mother considers these condition as signs that milk production is not enough for her baby needs. To meet the needs of babies, mothers immediately provided infant formula (what then resulted in the disturbance of lactation physiology). Their worries could affect *let-down* reflexes resulting in condition that is more difficult for them to breastfeed their babies. Mothers who received treatment had a failure of exclusive breastfeeding later, compared with mothers who did not get intervention. *"I think I have stopped (giving milk) since more than two what three months,. Not (giving) breast milk anymore ..."* (P1). *"When It was aged 0-6 months, I had infant formula because of the little productions. It was not long from the delivery. Maybe about a week, I already gave infant formula ..."* (P4). This is justified by looking at data from research PKGK that, informants with treatment stopped breastfeeding on average at week 12. While all informants who were not treated stopped breastfeeding on average at week 1. The informant's statement about the perception of insufficient milk is justified by the midwife that many cases of mothers failed to exclusively breastfeed because they consider the milk is inadequate for their babies. Midwives have been trying to explain that breast milk was enough for babies up to age 6 months. However, seeing babies' fussiness and crying, so the mothers chosen to give infant formula.

Maternal Factors

The following are results of in-depth interviews conducted on informants who received treatment. Two of the three informants know correctly about the definition of exclusive breastfeeding. *"What matters is for that time we only give our milk. So, food is prohibited to give (We should) wait until six months"* (P2). Meanwhile, all informants who did not get treatment, none of them knows the definition of exclusive breastfeeding correctly. *"Breast milk is from us, as food and drinks for the baby .. up to 2 years .."* (P5). They perceived that breast milk needs to be given until the child reached two years old, but they did not know that it only should be given up to 6 months. Almost all informants who either received treatment or not did not know about the importance of colostrum and whether colostrum should be thrown away or given to the baby. *"I forgot, I think ..never(seen it) ... oh yes! There was! Yellow white colored. So (I) cleaned and removed it. After the birth, it has not occurred any longer"* (P2). The informant who had got the intervention knew when the baby might be given additional food. *"At the age of going to seven months, (the baby may) eat extra like steamed rice"* (P2). Informants who did not get the intervention

did not know when the baby could be given additional foods *"Six months or less; I think not more than six months, I gave foods like tubers."*(P6). There was found a tendency of knowledge increase on mothers receiving treatment.

Lactation Guidance

Below are interview results of all informants, both treated and not received treatment. They recalled that they *"got lactation guidance during pregnancy examination. It is education about nutritious food for infants and mothers to be healthy, and the recommendation to give exclusive breastfeeding for up to 6 months"*. However, it was just some advice from health workers. Most lactation guidance was given without supporting device such as leaflet. The statement of the informant was confirmed by the midwife as a key informant, that *"the patient is given only a brief education about breast milk due to a large number of patients. Besides, at that time the leaflets have not made to be distributed to the patient"*.

Weight Gain During Pregnancy

The results of interviews with all informants regarding weight gain. The informants said that they *"gained weight during pregnancy, but the P4 informant could not see her weight gain because the MCH book was collected at midwife's house at that time"*. Furthermore, crosschecking of the MCH book (mother and child health books) of mother's weight gain revealed that they have not reached the recommended weight gain. Institute of Medicine (IOM) recommends weight gain during pregnancy regarding the maternal Body Mass Index (BMI) before pregnancy. Weight gaining on the mothers with perceptions of sufficient milk has not been in line with BMI. This is justified by the statement of the midwife that they have not done the calculation of BMI on the mothers who came to do antenatal care. So they have not provided suggestions about weight gain to be achieved during pregnancy.

Family Support

Husbands and parents are the closest people who can influence the informant to continue breastfeeding exclusively or to provide other foods/drinks to the baby, instead. One of the three informants who received the intervention had received support from the husband. The support forms of the husband were to help with the homework and to help the informant taking care of the baby when she felt tired. *"Yes, I am breastfeeding; my husband woke up too at midnight."* (P2.)

This is justified by the statement of the husband that the husband wakes up at midnight to take care of the baby. One of the three informants, who did not receive the intervention, received support from the husband. Forms of support of the husband were to help with the homework. *"My husband is Acehnese. He gave several types of vegetable for breastfeeding.. katuk leaves, spinach, he went to buy those in the early morning .."* (P4). While informants who did not get support from husband (both informants who received treatment and did not get treatment) got the support of husband or family but only in the form of a suggestion for breastfeeding. The primary role in the practice of breastfeeding was still fully submitted to the informant. Family support towards mothers breastfeeding has not been provided optimally.

Lactation Factor

Early Breastfeeding (EBF)

The results of interviews on all informants on EBF said that they *"did EBF. However, (it was) not done until the baby finds the mother's nipple"*. All informants said, *"EBF process is done for about 5-10 minutes only"*. Only one informant could not perform EBF because of delivery by cesarean section. Some informants said that EBF was very important and that they felt the close bond that they believed affected the milk production. It is mean EBF was not done by standard procedure.

DISCUSSION

Based on the results after collecting and processing data, it was found that the perceived milk insufficiency tended to exist to the mothers who felt their milk production had stopped or produced less

in quantity. However, if the baby was still restless and fussy, they perceived it as a sign that the milk was not adequate for their babies. This made most informants immediately provided infant formula. Their worries could affect *let-down* reflexes resulting in a condition that is more difficult for them to breastfeed their babies. The exact prevalence of perceived breastfeeding insufficiency has not been known (estimated between 30-80% of breastfeeding mothers). However, many researchers concluded that the perceived *milk insufficiency* was the reason why the mothers provided additional food earlier to their babies [9].

Regarding knowledge, mothers without treatment there was still lack of correct knowledge on the exclusive breastfeeding. Despite, nowadays, information on exclusive breastfeeding is not a new thing nor hard to find. Knowledge is the result of human sensing, or the result one is knowing towards an object through his or her senses (eyes, nose, ears, etc.) Adequate maternal knowledge on exclusive breastfeeding will affect and motivate the mother to give exclusive breastfeeding. Based on Zakiah's (2012) study there was a significant relationship between knowledge and exclusive breastfeeding ($p = 0.003$) [12].

The lactation guidance received by the informant was limited with a brief overview on exclusive breastfeeding. This was due to the numerous pregnant patients at the Health Center. Regarding the limitations of media and time for counseling, it should be provided a leaflet that can be read and recalled by the informant. By the results of qualitative studies conducted by Fikawati and Syafiq, it appeared that when ANC has not been widely utilized by health workers to provide information about exclusive breastfeeding to mothers so that mothers did not give exclusive breastfeed [13]. Information and support to the mother and her family should be given during pregnancy. Preparation for breastfeeding during pregnancy is important because with better preparation the mother is better prepared to breastfeed her baby.

The weight gain of all informants did not match the recommendation. Meanwhile, the Institute of Medicine (IOM) recommends weight gain during pregnancy regarding the Maternal Body Mass Index before pregnancy. According to Fikawati, et al. there is a relationship between energy sufficiency to mother's milk production. Mothers who have sufficient energy have more milk production [3]. Based on Trisnawati's (2010) study, there was a significant correlation between nutritional status during pregnancy and perception of lactation ability (p -value = 0.009), also, maternal weight gain during pregnancy had a significant correlation with the perception of lactation ability ($p = 0.002$) [14].

Family support received by informants was mostly in the form of recommendation, while an active role in breastfeeding practices was still entirely left to informants. According to many studies, the role of a father has been known to influence the decision to breastfeed greatly, the initiation of breastfeeding practices, and the duration of breastfeeding. The main functions of the family include the effective function, namely the internal function of the family for the fulfillment of psychosocial need, the need of mutual care and love giving, and need of mutual acceptance and supports [15].

Regarding EBF implementation, no informants performed EBF in line with the standard procedure. According to studies conducted by Fikawati and Syafiq, it was shown that EBF was positively associated with exclusive breastfeeding. Mothers who breastfeed immediately (less than 30 minutes) after birth was 5 to 8 times more likely to give four-month exclusive breastfeeding [13]. The role of health workers as a helper in EBF is vital. EBF failure is mainly due to EBF procedures not adhered to by birth attendants.

In line with Huang's study through a cross-sectional study in Taiwan, it was revealed that EBF has a significant relationship with the mother's perception of her milk supply [16]. Aisyah's research showed that one of the factors of exclusive breastfeeding failure was due to the absence of breastfeeding practices in the first hour after delivery [17]. To support the success of Early Breastfeeding and Exclusive Breast milk, WHO recommends 10 Steps to Successful Breastfeeding in healthcare facilities. Those are named as follows: Written policy on breastfeeding, trainings for officers, explaining the

benefits of breastfeeding to pregnant women, implementing Early Breastfeeding, presenting the correct technique of breastfeeding, informing to provide no food and or drink other than breast milk; administering outpatient care; helping nursing mothers as often as possible; not giving pacifiers, and fostering breastfeeding support groups [18]. Many challenges are faced in the implementation of the program, including lack of commitment, low implementation of the program in health care facilities as well as the lack of breastfeeding counseling for mothers [18].

CONCLUSIONS

This study on the perception of *insufficient milk* can be summarized as follows: a) Mothers who had not received treatment were lack of knowledge on exclusive breastfeeding. b) Lactation guidance was only given briefly and received by the informant at the time of checking pregnant. c) Gaining weight during pregnancy did not meet to the recommendations of breastfeeding before pregnancy. d) Family support for mothers was still in the form of recommendation, while the active role in breastfeeding practices was still wholly left to the mothers. e) Implementation of Early Breastfeeding Initiation is not by the procedure. Based from the research on the perceived insufficient milk, are suggested as follows: a) Increasing mother's knowledge about exclusive breastfeeding is very important done by a midwife. Efforts that can be done through more comprehensive lactation guidance during pregnancy. Also, postnatal guidance is also important to monitor the success of exclusive breastfeeding.

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