

Breastfeeding Practice Among Teenage Mothers And The Nutritional Status Of Their 0-6 Month Old Infants

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Abstract

Background: The percentage of early marriage in Indonesia is the second highest in ASEAN after Kamboja. The purpose of this study is to analyze breastfeeding practise among teenage mothers and the nutritional status of their 0-6 months infants.

Methods: The study was conducted on 16 teenage mothers. The qualitative method with in-depth interview and observation were used to obtain breastfeeding data. Quantitative method was used for obtaining data of infants' food intake (recall 2x24 hours) and anthropometry. Content analysis was used for the qualitative data, while the descriptive analysis was used for the quantitative data.

Results: The majority (87.5%) provided non-exclusive breastfeeding and 12.5% stopped breastfeeding. The majority (93.75%) during one month of study was exposed to infectious disease (fever, cough, runny nose, diarrhea).

Conclusions: All infants stayed well nourished, but the score of nutritional status decreased (62.5%).

Background

The percentage of early marriage in Indonesia ranks 37th in the world. Meanwhile, it is the second highest in ASEAN after Kamboja.¹ According to Basic Health Research in 2010, the percentage of the woman married the first time at the age of 15 years old is 4,8%. Meanwhile, the percentage of the woman married at the age of 15-19 years old is 41,9%.² Factor of social, economy, culture, urban-village residence, and unwanted pregnancy is the factors causing early marriage.³ The women married early increases the risk of early pregnancy, hence, it affects fertility rates based on the age group (Age Specific Fertility Rate or ASFR) of the women aged 15-19 years old. ASFR target of women aged 15-19 years old through the Medium-Term Development Plan in 2014 and the Millenium Development Goals (MDGs) in 2015 was 30 per 1000. However, the results of Indonesian Demographic and Health Survey in 2012 showed that ASFR of the women aged 15-19 years old in Indonesia amounted to 48 per 1000. It is higher in the rural area by 69 per 1000 compared to the urban area which is 32 per 1000.⁴ ASFR in Central Java amounted to 35 per 1000 for women aged 15-19 years old.⁵

The transition to parenthood is difficult for the teenage parents. Adolescence may experience the change of self-image and adjust the new role in relation to the responsibility of the baby care.⁶ The teenage mother who gets pregnant is more at risk of postpartum depression, which is the depression occurs after delivering the baby.⁷ In fact, the emotional feeling of the mother such as uncomfortable feeling (mental stress) causes the production of breastmilk halts prematurely.⁸ The results of the National Immunization Survey for the period 2004-2008 in the United States showed that only 19% of the teenage mother who exclusively breastfed until the baby aged 6 months while 34% of the mothers aged 20-29 years old and 49% of the mothers aged over than 30 years old.⁹ In Indonesia, the outcomes of the research conducted by Astuti in 2012 Denpasar showed that the majority of the teenage mother as the subject of the research

provided a non-exclusive breastmilk.¹⁰ The provision of complementary feeding which is not suitable for the age and needs of the baby can affect the health and nutritional status of the baby.¹¹ The causative factors of the malnutrition are the food supply and infection.

In Semarang District, the number of Couples of Fertile Age < 20 years old increased from 2889 couples in 2013 to 3059 couples in 2014.¹³ the number of Couples of Fertile Age < 20 years old in Bandungan Subdistrict is 167 couples, which consist of 38,3% of maternal mother and 37,7% of them are pregnant mother. For the teenage mothers, there is no research concerning the provision of the breastmilk and the nutritional status of the baby aged 0-6 months in Indonesia. Therefore, it is necessary to conduct a research on how the provision of the breastmilk and nutritional status of the baby aged 0-6 months by the teenage mothers in Bandungan subdistrict, Semarang district. The general purpose of this study is to analyse the provision of breastmilk and nutritional status of the baby aged 0-6 months by the teenage mothers in Bandungan subdistrict, Semarang district, Indonesia. The specific purposes are to analyse the characteristic of the teenage mothers, the provision of breastmilk, infant infectious disease, and the nutritional status of their baby aged 0-6 months.

Methods

This study used qualitative and quantitative methods (mixed methods research). This study was conducted in Bandungan subdistrict, Semarang district, Indonesia. The data were obtained from May 2015 to June 2015. Inclusion criteria for subjects were primipara teenage mothers aged 15-19 years old, having a baby aged ≤ 6 months, good communication, and willing to be the subject of the research. Exclusive criteria were teenage mothers who had more than 1 baby or a baby age ≥ 6 months. Subjects were recruited by reviewing data on breastfeeding mothers in the area obtained from health center data. All the research subjects were given an explanation of the study and all were willing to sign an *informed consent*. Research subjects interviewed an data collected include education level, employment status, residence status (still in the same house as parents or not), place of residence (village or city), and reasons for marriage. A total of 16 teenage mothers were recruited.

Other informants include of health workers and those who are closest to the teenage mothers, including parents, husband, and peer group. They were interviewed separately. The selection of these was done by purposive sampling, along with inclusion criteria such as, willing to be interviewed and having good communication skills. The determination of the informants was based on the level of familiarity with the teenage mother. The Informants selected consisted of 3 midwives, 12 parents (mother), 2 friends, 1 aunt from mother side, and 1 aunt from the father's side.

Anthropometric was measured to determine the nutritional status of teenage mothers and infants. Weight of the teenage mother was measured using a Camry brand digital weight scale with an accuracy of 0.1 kg. Height of the teenage mother was measured using a microtoise. Body mass index (BMI) was used for teenage mother aged 19 years old. BMI/Age was used for mothers aged 15-18 years old. Weight of the infants were conducted using a One Med brand digital baby scale with an accuracy of 0.1 kg. Length of

the infants were measured using infantometer. Each measurements of the infants were taken twice with the second sets of measurement being taken 4 weeks after the first. The nutritional status of infants were measured using Weight/Age Z score and Weight/Length Z score. The data on infectious diseases were collected twice, with the second set of measurement being taken 4 weeks after the first. Infants' food intake were taken using dietary recall 2x24 hours. Dietary recall were taken only twice because the infants food intake varied little. The first recall 1x24 hours was performed on the third or fourth day in the third week. The second recall 1x24 hours carried out on the seventh day in the third week. Dietary recall were used to identify infants food intake, such us breastmilk, breastmilk substitutes, or complementary food. The infants food intake from breastmilk was counted by frequency and time of breastfeeding. Based on theory, the quantity of breastmilk on the 5 minutes breastfeeding first is ± 112 ml, the quantity of breastmilk on the 5 minutes breastfeeding second is ± 64 ml, and the quantity of breastmilk on the 5 minutes breastfeeding last is only ± 16 ml.²¹ The nutritional value of the food supply data obtained from recall 2x24 hours is counted according to the Food Composition Table in 2009 or Nutrisurvey in 2007.

The data collection on breastfeeding behaviour of the teenage mother was conducted by in-depth interview and observation. the researcher used manual in-depth interviews, with voice and image recorder. Manual in-depth interview contained breastfeeding behaviour questions, such us breastfeeding activities, the implementation of early breastfeeding initiation, the provision of pre-lacteal food, colostrum, and provision of complementary food, or early breast-milk substitutes. Manual in-depth interviews could be developed during interviews.

The analysis of anthropometric data and characteristic data were undertaken by entering the data in statistical application. Percentages and counts were used to describe the results. All results of in-depth interviews and observations were made in the form of transcribed verbatim. Transcribed verbatim was analyzed using content analysis. The meanings obtained from transcribed verbatim are categorized and it would be interpreted.

Results And Discussion

The characteristic of Teenage Mother

The age of the teenage mothers were 15-19 years old, with 75% is for 17-19 years old and 25% is for 15-16 years old. Their educational background were primary school (50%), secondary school (37,55%), and high school (12,5%). None of teenage mother had underweight (81,25% of them had normal nutritional status, 12,5% of them had overweight, and 6,25% of them were obese). The majority of teenage mother were housewives (93,75%) and they are still living with parents (93.75%). The majority of teenage mothers (81.25%) were not ready to get married. Only there were 18.75% of teenage mothers who had been married because of own willingness. Other reasons were unwanted pregnancy (56%), demands of the parents (12,5%), and arranged marriage (12,5%). The unwanted pregnancy can be caused by promiscuity (pre-marital sex) with their boyfriend.

There are three stages of adolescence, which are the beginning of adolescence period (10-13 years old), the middle of adolescence period (14-16 years old), the final of adolescence period (17-19 years old).⁷ An early marriage and pregnancy affect on the psychosocial complication.¹⁶ The teenage mothers often feel anxious about their new responsibility as a mother.¹⁷ They feel uncomfortable among their peers, outcasted from the joyful activities, and forced to enter adulthood early.

The Breastfeeding Activities of Teenage Mother

The implementation of Early Breastfeeding Initiation, the provision of pre-lacteal food, colostrum, breastmilk substitution or early complementary food, as well as the pattern of breastfeeding by the young mothers are presented in Table 1.

Table 1. Breastfeeding Activity of the Teenage Mothers

The Breastfeeding Activity of the Teenage Mothers (N=16)	n	%
The implementation of Early Breastfeeding Initiation:		
Yes	11	68.75
No	5	31.25
Provision of Pre-lacteal Food:		
Yes	10	62.5
No	6	37.5
Provision of the Colostrum:		
Yes	13	81.25
No	3	18.75
Provision of Complementary Food/ Early Breastmilk Substitution:		
Yes	15	93.75
No	1	6.25
The Pattern of Breastfeeding:		
Partial Breastfeeding	13	81.25
Predominant Breastfeeding	1	6.25
Stopped Breastfeeding	2	12.5

Table 1 shows that Early Breastfeeding Initiation is not implied to all mothers. The majority of the teenage mothers has provided pre-lacteal food and complementary food or early breastmilk substitution. During the research, the majority of the teenage mothers still breastfeed. Nevertheless, they did not breastfeed exclusively.

The Implementation of Early Breastfeeding Initiation

Table 1 shows that the majority of teenage mothers (68.75%) have approved the implementation of Early Breastfeeding Initiation in the maternity hospital. Nonetheless, there are 2 of 10 regulations which are not implemented properly by the maternity hospital workers. The first, the baby had been given the opportunity to search for the nipple, but not to find the nipple. The process of searching for a mother's nipple lasted only 10-30 minutes. According to the theory, the first 38 minutes are the stage of the quiescent state of alert, and occasionally the infant would open his eyes to see his mother. Between 38-40 minutes: the infant would make some noises, such as the mouth movement craving for breastmilk,

and then he would kiss, lick the hand and then spill out his saliva, begin to move toward the breast, and find, lick, suck the nipples, open mouth, and get breastfed well.¹⁸ The second, it is about the father's support in order to help mothers recognize the signs or the baby's behavior before getting breastfed. It has not been implemented properly.

During the prenatal period, there is only 1 of 16 teenage mothers (6.25%) got socialization about early breastfeeding. In fact, the result of quantitative research conducted by Raharjo (2014) showed that the role of the midwives affects to the implementation of early breastfeeding.²²

The Provision Pre-lacteal Food, Colostrum, and Provision of Complementary Food or Early Breast-milk Substitutes

Table 1 shows that the majority of infants (62.5%) received pre-lacteal food such as sugar water, mineral water, honey, or formula milk. A total of 43.75% infants received it from the the labor force, while 18.75% of infants got pre-lacteal food from the family.

The majority of teenage mothers (81.25%) also provided colostrum. A total of one teenage mother (6.25%) did not provide colostrum because the infant was sleeping. Meanwhile, two other teenage mothers (12.5%) did not give colostrum due to the smell, taste, and its shape. In fact, the colostrum contains living cells resembling white blood cells to kill germs.²⁰

The majority of teenage mothers (93.75%) provided Complementary Food or Breastmilk Substitution too early. Their infants (46.67%) were served complementary food or breastmilk substitution in under one month age. Besides the labor force, giving complementary food or breastmilk substitution too early also due to the suggestion from the closest relatives, especially the mother. Only 2 of 16 teenage mothers (12.5%) who provided complementary food or breastmilk substitution too early willingly.

The Patterns of Breastfeeding

The majority of teenage mothers (81.25%) breastfed partially because the fear that breastmilk does not come out milk is not sufficient. Meanwhile, one teenage mother (6.25%) predominantly breastfed because the infants have been given pre-lacteal food such as Javanese sugar water by the labor force, which is then replicated by the parent (mother) of the teenage mother when the infant was already at home. The majority of teenage mothers (93.75%) are still living with parents. They are still dependent on their parents and less mature in deciding a problem, Thus become one impact of the early marriage.²² In fact, the results of this study indicate that in addition to supporting teenage mothers to breastfeed, parents (mother) also has to suggest the provision of pre-lacteal food, complementary food or breast-milk substitution too early.

A total of 2 other teenage mothers (12.5%) stopped breastfeeding. A teenage mother who stopped breastfeeding (6.25%) with the reason that breastmilk only came out 1 month due to the flat nipples, cognitively stated that breastfeeding is mandatory if the breastmilk comes out. Another, teenage mother

who stopped breastfeeding (6.25%) due to the nipple interference (sore nipples, *mbangkak'i* or swollen breast, blood and pus burst out of the breast), cognitively also stated that breastfeeding is mandatory when there is no nipple interference. The sore nipple is caused by the fault of feeding techniques in which the baby has not been breastfed appropriately. If the baby is fed only on the nipple, the baby will get a little milk because the baby's gums do not press the lactiferous sinus area, while the mother will experience the sore on the nipples. The fault of the baby who is not breastfed appropriately is the result of the use of pacifier when the baby is still learning to suckle. The use of baby pacifiers can cause nipple confusion (nipple confuse) because the sucking mechanism is different between the nipple and pacifier.²¹

According to the WHO definition, breastfeeding patterns are categorized into three types, namely exclusive breastfeeding, predominant breastfeeding and partial breastfeeding. Exclusive breastfeeding means to not give the baby other food or drink, including water, other than breastfeeding (except medicines and vitamin or mineral drops, breastmilk is also allowed). Predominant breastfeeding is feeding the baby, but also providing a little water or water-based beverages, such as tea, as a pre-lacteal food before the breastmilk comes out. Partial breastfeeding is feeding the baby and given artificial food such as formula milk, porridge, or other foods before the baby was six months old. That food is both supplied continuously or given as a pre-lacteal food.²³ Feeding too early can cause problems in the baby's stomach, resulting in the inhibition of the absorption of nutrients. Infants can experience the decrease of nutrition.²⁴

The Infants Food Intake

The infants food intake can be seen from the following table 2.

Table 2. Infants Food Intake

Infant of Teenage Mother (ITM)	Sufficient Level of Energy		Sufficient Level of Protein		Sufficient Level of Carbohydrate		Sufficient Level of Fat	
	%	Category	%	Category	%	Category	%	Category
ITM1	98,4	Moderate	106,0	Adequate	110,9	Adequate	101,9	Adequate
ITM2	87,8	Moderate	86,7	Moderate	105,6	Adequate	75,9	Subordinate
ITM3	101,9	Adequate	103,9	Adequate	103,1	Adequate	102,4	Adequate
ITM4	102,7	Adequate	104,9	Adequate	111,1	Adequate	97,7	Moderate
ITM5	108,3	Adequate	117,6	Adequate	111,1	Adequate	105,7	Adequate
ITM6	104,8	Adequate	100,7	Adequate	125,3	Adequate	89,8	Moderate
ITM7	100,9	Adequate	103,6	Adequate	102,8	Adequate	100,3	Adequate
ITM8	103,1	Adequate	111,4	Adequate	107,1	Adequate	99,9	Moderate
ITM9	103,2	Adequate	101,8	Adequate	116,3	Adequate	93,9	Moderate
ITM10	92,3	Moderate	135,0	Adequate	96,4	Moderate	81,8	Moderate
ITM11	109,4	Adequate	111,4	Adequate	110,6	Adequate	109,9	Adequate
ITM12	103,5	Adequate	105,7	Adequate	104,7	Adequate	104,0	Adequate
ITM13	103,2	Adequate	118,9	Adequate	107,2	Adequate	97,9	Moderate
ITM14	103,4	Adequate	98,7	Moderate	126,2	Adequate	86,0	Moderate
ITM15	79,3	Subordinate	147,4	Adequate	88,4	Moderate	51,2	Deficit
ITM16	104,7	Adequate	156,9	Adequate	105,9	Adequate	105,2	Adequate

Table 2 shows that the majority of energy intake infants (75%) categorized as the adequate level. The majority of protein intake infants (87.5%) were also adequate. No different, the majority of carbohydrate intake infants (87.5%) were in a adequate level. Based on their fat intake, as many as seven infants (43.75%) were on a adequate level, 7 infants (43.75%) were in the moderate category, and 2 infants (12.5%) experienced shortages of fat intake.

Based on the food intake, it is known that there was 1 infant (6.25%) who lacked the fat intake and 1 infant (6.25%) had a shortage of energy intake and fat. Both infants were not breastfed because her mother had stopped breastfeeding and replace it with the breastmilk substitution and complementary food. Both infants were deficient in nutritional intake due to the improper provision of complementary food and breastmilk substitution, which was too small in quantity and watery.

Breastmilk is the best food that meets the nutritional needs of infants for optimal growth and development. If the baby is getting enough breastmilk, the water and nutrients in breastmilk will be fulfilled.²⁵ Carbohydrates in the breastmilk is lactose in which the fat contains a lot of polyunsaturated fatty acid, main protein is easily digested lactalbumin, the vitamin and mineral content is sufficient. Energy is supplied mainly by carbohydrates and fats. Lactose is a type of carbohydrate that is beneficial for the baby's digestive tract. Minimal fat should provide 30% of energy. Of breastfeeding, the baby absorbs about 85-90% of fats.²⁶ Fat is needed in the absorption of vitamins A, D, E and K as well as the sources of essential fatty acids. Essential fatty acid deficiency can lead to developmental and growth delays.²⁵

Infectious Diseases

The results showed that during the first months of the study, there was only 1 out of 16 infants (6.25%) who never got an infectious disease such as fever, cough, runny nose, or diarrhea. A total of 9 infants (56.25%) got a fever in which 4 of them got the fever after immunization. A total of 7 infants (43.75%) got cough and 10 infants (62.5%) got cold. There were 3 infants (18.75%) who got diarrhea in which 2 of them experienced it when their mother tried to give complementary food or early breastmilk substitution, and one other infant experienced it because of the replacement of the brand of complementary food.

Breastmilk protects the baby from the infectious disease.²⁵ Breast-milk contains immunoglobulins that can provide protection against the disease.²⁰ According to research results conducted by Rahmadhani, et al in Padang, exclusive breastfeeding is associated with an acute watery diarrhea.²⁷ According to the research conducted by Widarini & Sumasari in 2009 in Bandung, exclusive breastfeeding is associated with the incidence of Upper Respiratory Tract Infection.²⁸

The Nutritional Status of the Infants

The data of the infants nutritional status can be seen in table 3.

Table 3. Nutritional Status of the Infants

Infant of Teenage Mother (ITM)	Weight of the Baby (Gram)	Nutritional Status											
		Early Birth				Anthropometry Measurement I dan II (Beginning and End of Month)							
		Score Z (W/A)	Category	Score Z (W/L)	Category	Score Z (Weight/Age or W/A)				Score Z (Weight/Length or W/L)			
						Beginning	Category	Final	Category	Beginning	Category	Final	Category
ITM1	2700	-1,42	Well-nourished	-0,31	Normal	0,89	Well-nourished	1,18	Well-nourished	4,00	Overweight	-0,38	Normal
ITM2	3300	-0,10	Well-nourished	1,23	Normal	-1,72	Well-nourished	-1,30	Well-nourished	1,34	Normal	-1,00	Normal
ITM3	3100	-0,52	Well-nourished	-0,11	Normal	-1,31	Well-nourished	-0,73	Well-nourished	-0,32	Normal	-0,05	Normal
ITM4	3400	0,36	Well-nourished	-1,22	Normal	-0,25	Well-nourished	0,22	Well-nourished	1,42	Normal	0,83	Normal
ITM5	3100	-0,52	Well-nourished	-0,81	Normal	0,08	Well-nourished	0,34	Well-nourished	3,71	Overweight	1,10	Normal
ITM6	2600	-1,47	Well-nourished	-1,52	Normal	-1,47*	Well-nourished	0,78	Well-nourished	-1,52*	Normal	-0,57	Normal
ITM7	3700	0,98	Well-nourished	0,07	Normal	1,28	Well-nourished	0,74	Well-nourished	2,54	Overweight	0,13	Normal
ITM8	3800	0,89	Well-nourished	0,80	Normal	0,60	Well-nourished	0,39	Well-nourished	-0,67	Normal	-0,12	Normal
ITM9	3000	-0,52	Well-nourished	0,10	Normal	0,02	Well-nourished	-0,13	Well-nourished	-0,23	Normal	-0,23*	Normal
ITM10	3600	0,51	Well-nourished	2,74	Overweight	-1,20	Well-nourished	-1,52	Well-nourished	-2,17	Underweight	-2,35	Underweight
ITM11	3300	0,15	Well-nourished	1,76	Normal	0,15*	Well-nourished	-0,20	Well-nourished	1,76*	Normal	2,62	Overweight
ITM12	3000	-0,73	Well-nourished	0,85	Normal	0,36	Well-nourished	0,20	Well-nourished	0,13	Normal	-0,01	Normal
ITM13	3100	-0,29	Well-nourished	1,76	Normal	-0,20	Well-nourished	-0,39	Well-nourished	0,30	Normal	-0,24	Normal
ITM14	2700	-1,42	Well-nourished	-0,31	Normal	-0,36	Well-nourished	-0,61	Well-nourished	-0,55	Normal	-0,66	Normal
ITM15	3500	0,31	Well-nourished	-0,12	Normal	-0,22	Well-nourished	-0,56	Well-nourished	-0,55	Normal	-0,74	Normal
ITM16	3100	-0,29	Well-nourished	1,10	Normal	-0,19	Well-nourished	-0,66	Well-nourished	-0,37	Normal	-0,41	Normal

Note :

Blue = Increasing

Red = Decreasing

* = Stable

Table 3 shows that none of the infants with deficit of birth weight. At the early birth, all infants (100%) were well-nourished (index W/A). Based on the index of Weight/Length (W/L), the majority of infants (9.75%) had normal nutritional status and 1 infant (6.25%) had overweight. According to the nutritional status of adolescent mothers breastfeeding, the majority of teenage mothers (81.25%) had normal

nutritional status, 12.5% of teenage mothers had overweight, and another one (6.25%) experienced obesity. According to the research carried out by Karima & Achadi in 2012 in Jakarta, pre-pregnancy weight and maternal weight gain during pregnancy has a significant relationship with birth weight of the baby.²⁹ Whereas, the nutritional status of the mother during breastfeeding is the effect on the nutritional status of the mother before and during the pregnancy.³⁰

Based on the index of Weight/Age (W/A) from the early birth until the anthropometric measurements I and II, all infants (100%) stayed well nourished. Nevertheless, based on the score Z of W/A, there were 9 infants (56.25%) had the Z score decreased (6 infants got the Z score increased and subsequently decreased and 3 infants got the Z score decreased). Other, 2 infants (12.5%) got increased, 3 infants (18.75%) got the Z score decreased and then increased again. Otherwise, there were 2 infants (12.5%) who got the anthropometric measurement I result in the same as at the early birth (anthropometric measurements I was performed when those two infants were 0 day old). Among of them, there was 1 infant increased the Z score and the other got the Z score decreased on the anthropometric measures II.

Based on the index of Weight/Length (W/L) from the beginning of the birth until the anthropometric measurements I and II, the majority of infants (68.75%) remained as normal nutritional status, 3 infants (18.75%) got the nutritional status from normal to overweight to normal again, 1 infant (6.25%) got the nutritional status of overweight to underweight, and 1 infant (6.25%) got the nutritional status of a normal to overweight. Despite the fact that the majority of infants (68.75%) remained normal nutritional status, but based on the score Z of W/L, there were 11 infants (68.75%) got the Z score decreased (5 infants or 31.25% had the Z score increased then decreased and 6 infants or 37.5% had more the Z score decreased). Other, there were 2 infants (12.5%) got the Z score decreased, then increased again and 1 infant (6.25%) got the Z score decreased, then subsequently stable. On the other hand, there were 2 infants (12.5%) who got the anthropometric measurements I result in the same as in the early birth (anthropometric measurements I was carried out when the two infants were 0 day old). Both of these infants had the Z score increased on anthropometric measurements II.

The results of this study were in line with the results of research conducted by Ridzal, et al in Makassar in 2013 which showed that children exclusively breastfed and children not exclusively breastfed have the same chance to have a adequate nutritional status, subordinate nutrition, and even malnutrition.³¹ The causation of the nutritional problems is multi-factorial. Nutritional problems are mainly due to poverty, lack of availability of food, subordinate sanitation, lack of the knowledge about nutrition, balanced diets, and health.¹² However, a number of sufficient breast-milk results in the proportional weight.²¹

Conclusions

Among 16 teenage mothers, the majority of them (81.25%) provided partial breastfeeding, 1 mother (6.25%) provided predominant breastfeeding, and 2 mothers (12.5%) had stopped breastfeeding. The majority of infants (93.75%) had experienced the infectious disease (fever, cough, runny nose, or diarrhea) during one month of the study. The majority of the infants got the Z score decreased (W/A and

W/L), even though the nutritional status was still in the category of well-nourished or normal. Exclusive breastfeeding by the teenage mothers need to be optimized to achieve the optimal nutritional status of infants at the age of 0-6 months old.

Declarations

Competing interests

This manuscript has not been published and is not under consideration for publication elsewhere. We have no conflicts of interest to disclose.

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