Description Of The Growth In Weight And Length Of Infants Aged 0-6 Months Who Were Given Breast Milk And Additional Foods At The Rawasari Public Health Center In Jambi City

Arlina karoba[1], Nurlinawati[1], Meinarisa[1]
Program Studi Keperawatan, Fakultas Kedokteran dan Ilmu Kesehatan, Universitas Jambi, Kota Jambi, Indonesia
Corresponding Author : akaroba23@gmail.com

ABSTRACT

The age of babies under six months is a golden period that can be realized if during this period the baby gets the appropriate nutritional intake for optimal growth and development. The purpose of this study is to determine the description of the growth of body weight and body length of babies aged 0-6 months who are given breast milk and additional food at the Rawasari Community Health Center, Jambi City. Using a descriptive quantitative method. The sampling technique used Quota Sampling with 15 respondents who were exclusively breastfed and 15 babies who were not exclusively breastfed. The results of the study The description of the weight of babies aged 0-6 months who were exclusively breastfed were in the undernutrition and overnutrition categories of 1 respondent each (7%) and the good nutrition category was 13 respondents (86%), The description of the weight of babies who were non-exclusively breastfed were in the good nutrition category of 10 respondents (67%), the overnutrition category was 4 respondents (26%), the undernutrition category was 1 respondent (7%), The description of the length of babies aged 0-6 months who were given exclusive breastfeeding and non-exclusive breastfeeding at the Rawasari Health Center had the same results, namely the short category of 1 respondent (7%) with the normal category of 14 respondents (93%). It can be concluded that babies who are given additional food at the age of 0-6 months can make babies become overweight or obese. Suggestions The results of this study can be a source of information for mothers so that they can provide nutrition to their children at the right time or age.

Keywords: *Babies, Body Weight, Body Length, Breast Milk*

INTRODUCTION

Baby is a period of rapid growth and the process of maturation takes place continuously, especially the increase in the function of the nervous system. In addition to ensuring the ongoing process of optimal growth and development, babies need good health care including getting exclusive breastfeeding for 6 months, introduced to complementary foods according to their age, getting immunizations according to schedule and getting appropriate parenting[1].

Growth (growth) is a change in large, number, size, or dimension of cells, organs, or individuals, can be measured by weight (grams and kg), length (cm), bone age, and metabolic balance (calcium retention and body nitrogen). Factors that can affect growth in children include hereditary factors (ethnicity, race, and gender), environmental culture, social status and family economy, climate, sports, health status, hormonal factors and the factors that most influence the growth of infants, namely nutrients contained in breast milk are very good for infants aged 0-6 months[2].

ASI contains colostrum which is rich in antibodies because it contains protein for the immune system and killers of germs in high amounts so that exclusive breastfeeding can reduce the risk of death in infants. Yellowish colostrum is produced on the first day to the third day. The fourth day until the tenth day of milk contains immunoglobulin, protein, and lactose less than colostrum but fat and calories are higher with whiter milk color, which in infants given PASI cannot get a composition

found in breast milk and it causes babies who get breast milk have far higher anti -body than babies. Babies who are given PASI are at risk of having excess weight much higher compared to babies who get milk. This is because a baby given breast milk tends to take according to what it needs and then stops, while babies who are given formula milk tend to take more calories[3].

United Nations Children's Fund (UNICEF) and the World Health Organization (WHO) recommend exclusive breastfeeding until babies aged 6 months, over the age of 6 months babies should be given additional food both semi -solid and solid. Exclusive breastfeeding is very instrumental in reducing the number of pain and death of children, because breast milk is the best food that contains nutrients that are needed by infants at the age of 0-6 months. In addition, breast milk also contains enzymes, hormones, immunological content and anti -infections[4].

The global target for exclusive breastfeeding to infants according to WHO is as many as 50% of WHO data shows globally only 40% of babies under 6 months who get exclusive breastfeeding5. The 2017 IDHS results show that only 52% of children under 6 months get exclusive breastfeeding, which means there are 48% of children under 6 months throughout Indonesia who do not get exclusive breastfeeding[6].

Based on these data it can be concluded that almost half of the total number of babies under the age of 6 months in Indonesia does not get exclusive breastfeeding. A decrease in the percentage of babies who get exclusive breastfeeding occurs as a result of being influenced by several factors, such as factors from the mother, factors from children and other factors. Factors from mothers that can affect exclusive breastfeeding are the age of the mother, smoking status, type of labor, use of contraception, maternal education level, mother's work status, and the use of pacifier bottles[6].

The scope of exclusive breastfeeding in 2022 based on data from the Jambi City Health Office of 27.14%, has not yet reached the program target in 2022 which is 50%. Only one district has reached the target program, namely Tanjung Jabung Barat Regency of 72, 04%. As for the achievements of exclusive breastfeeding indicators in 20 Puskesmas in Jambi City in 2022 as follows[7].Based on the data above the number of infants aged 0-6 months who visited the Puskesmas in Jambi City in 2022 the most were found in the Rawasari Puskesmas which became the location of the study with 15.6 % exclusive breastfeeding and 11 % did not exclusively breastfeeding with a population of 302 babies who received exclusive breastfeeding and 89 babies who were not exclusive at the age of 0-6 months.

Ideally, breastfeeding food is given after the baby is 6 months old to meet the nutritional needs and energy of the baby. The form of ASI's companion food varies greatly and must be given varied to be able to get perfect energy such as fruit, baby biscuits, baby porridge and further will get rice. The principle of feeding to infants must be changed gradually from soft food until the baby is introduced with solid food. Family habits in giving MP-ASI are usually revealed by parents to their children such as giving formula milk, honey, water and others. The pattern of people who still entrust this can

accelerate the growth of babies will follow these habits as a form of compliance with parents, this is what triggers the administration of MP-ASI to infants 0-6 months[8].

From the results of research conducted by Izhar (2022) states that children who consume breast milk exclusively show better progression in development compared to children who do not consume ASI9. Hera Octavia's research in 2021 got the results that 14% had an abnormal status and almost all respondents 86.0% had normal nutritional status10. In addition, Jumadillia's research in 2018 states that of the 14 babies who get exclusive breastfeeding more than most (85.7 %) babies have good body length while of 14 non-exclusive babies are less than half (21.4 %) which have good body length[11].

Based on the phenomenon and initial survey above the researcher is interested in conducting research on "Overview of Weight Growth and Body Length of Babies Age 0-6 Month

METODE

The type of research used in this study is that quantitative research decorates this research method is a research method that uses data in the form of numbers and emphasis on objective measurement of results. This research uses quantitative deccriptive research design using research instruments[12].

In this study the location chosen was the Rawasari Puskesmas Jambi City. In addition, this study was conducted on 15-29 July 2024. The population in this study was all infants aged 0-6 months in the working area of the Rawasari Puskesmas Jambi City 2022 totaling 302 babies who received exclusive breastfeeding and 89 babies who were not exclusive breastfeeding. The sample skill pattern is taken using the quota sampling technique. According to Helwig Ne in 2018 said the technique to determine the stilts of the population that had certain characteristics to meet the amount (quota) desired[13]. With the number of samples of this study 15 babies who received breast milk and 15 babies were given additional food.

This research data is primary data obtained from answers to questions given to respondents with the help of research tools in the form of questionnaires (the researcher took from previous studies sourced from Istinawati Y. Differences in the growth of infants aged 0-6 months, Lowokwaru District, Malang City Final Assignment. Published Online 2014) then shown to respondents, then the results are used to obtain data in the study. Secondary Data: Anthropometric data for infants aged 0-6 months who get exclusive breastfeeding and formula milk are obtained by looking at the KIA, KMS and Posyandu Books to find out weight, body length, head circumference and gestational age at birth.

Data is processed by tabulating each variable, then taken in the form of a frequency distribution table and is explained narratively about body weight and body length aged 0-6 months who consume breast milk and formula milk.

RESULT

1. Characteristics of Mother Respondents

Tabel 1 Frequency Distribution of Characteristics of Baby Mother Respondents

No	Caracteristic	F	%	N
1.	Mother ages			
	17-25 years	6	20	30
	26-35 years	21	70	
	36-45 years	3	10	
2.	Education mother			
	college	18	60	
	senior high school	10	33.3	
	junior high school	2	6.7	30
	elementary school	0	0	
3.	Pekerjaan Ibu			
	Haouse wife	19	63.3	
	Self-employeed	6	20	
	Midwivery	1	3.3	30
	Civil Servent	2	6.7	
	Doctor	1	3.3	
	Entrepreneurial	1	3.3	

Based on Table 1. Shows that the majority of 26-35 years old baby respondents were 21-35 years of respondents with a percentage of 70% of infant respondents aged 17-25 years as many as 6 respondents with a percentage of 20% and aged 36-45 years as many as 3 respondents with a percentage Respondents or 63.3 % of the total respondents as for other jobs, namely Wirasuasta, Midwives, Civil Servants, Doctors and Entrepreneurs.

2. Characteristics of Baby Respondents

Tabel 2 distribution Characteristics of Baby Respondents

No	Caracteristic	F	%	N
1.	Babys age			
	1-2 months	6	20	30
	3-4 months	1	53.3	
	5-6 months	8	26.7	
2.	Gender			
	Male	15	50	30
	Female	15	50	

Based on Table 2, it can be concluded that the majority of infant respondents aged 3-4 months based on table 4.4 above can be seen in the weight picture of infants aged 0-6 months given exclusive breastfeeding and non-exclusive breastfeeding at the Rawasari Puskesmas and categorized Based on the standard table BB/U from 15 respondents good nutrition category as much as 86%. In the genitals 50% are male and 50% of the type of female clamine.

3. Distribution form of additional food is given

Tabel 3 Distribution form of additional food is given

Caracteristic	F	%	N
additional food			
poriage	2	13,33	
Banana milk	0	0	15
Formula	13	86,67	
Rice	0	0	

Based on Table 3 above it can be seen that the form of complementary foods given by the majority is given formula milk with 13 respondents or 86.67 % and the part of the milk porridge is 2 respondents or 13.33 %.

4. Weight description of infants aged 0-6 months given exclusive breastfeeding and non-exclusive of breastfeeding

Tabel 4.4 Explanation of baby weight aged 0-6 months given exclusive breastfeeding and non-exclusive breastfeeding

Caracteristic	exclusive breastfeeding		non-exclusive of breastfeeding	
	F	%	F	%
Body weight				
Malnutrition	0	0%	0	0%
Lack of nutrition	1	7%	1	7%
Good nutrition	13	86%	10	67%
overweight	1	7%	4	26%
Total	15	100%	15	100%

Based on Table 4 above, it can be seen that the baby's weight description of 0-6 months is given exclusive breastfeeding and non-exclusive breastfeeding at the Rawasari Puskesmas and categorized based on the standard table BB/U anthropometry from 15 infant respondents given exclusive categories of less than 7%, respondents with more nutritional category as much as 7%and respondents in the good nutritional category as much as 86%. In non -exclusive breastfeeding infants from 15 respondents get a 7 %less nutrition category, respondents with a 26 %nutritional category and respondents in the good nutrition category 67 %. So it can be drawn that babies who are given additional food at the age of 0-6 months can make the baby become obesity or obesity in infants who are seen from the number of babies who have more nutrition in infants who are given non-exclusive breastfeeding.

5. The length of the baby's length of the baby aged 0-6 months given exclusive breastfeeding and non-exclusive breastfeeding

Tabel 5 Features of the baby's length of the baby aged 0-6 months given non-exclusive breastfeeding

Karakteristik	Asi Eksklusif		Asi Non Eksklusif	
	F	%	F	%
Length of baby				
Very short	0	0	0	0
Short	1	7%	1	7%
Normal	14	93%	14	93%
Tall	0	0%	0	0%
Total	15	100%	15	100%

Based on Table 5 above, it can be seen that the length of the baby's body length aged 0-6 months given exclusive breastfeeding and non-exclusive breastfeeding in the Rawasari Puskesmas is carried out based on the standard table of Anthropometry PB/U from 15 respondents there is a short category of 7%, respondents in the normal 93% category and the same results in both groups of respondents.

DISCUSSION

Based on the results of research conducted at the Rawasari Puskesmas regarding the weight and body length of infants aged 0-6 months given exclusive breastfeeding and non-exclusive breastfeeding, 30 respondents who received exclusive and non-exclusive breastfeeding were divided into 50% or 15 respondents received exclusive breastfeeding and 50% or 15 other respondents received non-exclusive breast milk. Respondents who have the most ideal body weight and body length rates are groups of respondents who get exclusive breastfeeding. This is caused because breast milk is the most ideal food for infants aged 0-6 months because breast milk contains nutrients that are in accordance with the development of the digestive organs of infants at the age of 0-6 months that have not yet digest and completely absorb food substances apart from breast milk.

Based on the results of the study obtained regarding the characteristics of the majority respondents' respondents aged 26-35 years as many as 21 respondents with a percentage of 70% of infant respondents aged 17-25 years as many as 6 respondents with a percentage of 20% and 36-45 years old as many as 3 respondents with a percentage of 10%, according to Gusti Putu's research in 2013 found the prevalence of exclusive breastfeeding and the duration of breastfeeding for six months in older mothers. According to Wuthrich-Reggio in Gusti 2013 found that mothers aged 26-42 had the possibility three times to breastfeed compared to mothers aged 18-25 years. Older mothers tend to have higher education, are married, multipara and if they work, have flexible jobs so that it is possible to pump breast milk[14].

Based on the educational of respondents, the majority of the high school graduates of the high school graduates were 18 respondents or 60% of the total respondents, in accordance with previous research which stated that mothers with the latest education at the university were longer giving breast milk

than mothers who graduated in basic education. The high level of education is one of the factors in forming broad knowledge so that a person has broader insights and easily receives information. Highly educated mothers are also more exposed to information from the health center regarding the benefits of breastfeeding[14].

Based on the work of the majority of respondents' mothers are housewives with 19 respondents or 63.3 % of the total respondents, the other jobs are entrepreneurs, midwives, civil servants, doctors and entrepreneurs. According to Ida Reggio's research in Gusti 2013 there was no relationship between the work of the mother and exclusive breastfeeding but more mothers who did not work who gave exclusive breastfeeding than mothers who worked. Another study by Tan Reggio in Gusti 2013 stated that mothers who did not work had a 3.5 -time more likely to provide exclusive breastfeeding than working mothers. The decision to return to work before a six -month -old baby is one of the main reasons a mother cannot provide exclusive breastfeeding[14].

Based on the results of research the characteristics of the majority of infant respondents aged 3-4 months as many as 16 respondents or 53.3% aged 5-6 months 8 respondents or 26.7% and 1-2 months as many as 6 babies or 20%, the characteristics of respondents by sex averaged 50% male sex and 50% type of female clamant.

Based on the results of the study, it was found that the form of breastfeeding food given was the majority of formula milk with 13 respondents or 86.67 % and the Sisah was given 2 respondents or 13.33 % milk porridge. Based on the 2018 UNICEF research in Zakia 2023 states mother's milk is an ideal food for infant growth and development. Recommendations from the United Nations Childrens Funds stated that children should only be breastfed for at least six months and solid food should be given after the child is six months old and breastfeeding is continued until the child is two years old. Based on the data obtained, globally shows the level of exclusive breastfeeding is quite low at only 41%[15].

Overview of baby weight aged 0-6 months given exclusive breastfeeding and non-exclusive breastfeeding at the Rawasari Puskesmas and categorized based on BB/U anthropometry standard tables from 15 infant respondents who were exclusively breastfeeding there were 7%nutritional categories, respondents with more nutritional categories and respondents in the good nutrition category as much as 86%. In non -exclusive breastfeeding infants from 15 respondents get a 7%less nutrition category, respondents with a 26%nutritional category and respondents in the good nutrition category 67%.

So it can be drawn that babies who are given additional food at the age of 0-6 months can make the baby become obesity or obesity in infants who are seen from the number of babies who have more nutrition in infants who are given non-exclusive breastfeeding. Because babies who get exclusive breastfeeding have the opportunity to live better than babies who get formula milk. The results of

research in Brazil show that breastfeeding alone plays a very role in increasing infant growth proportionally which is assessed by body weight (BB) and height (TB) [16].

According to Anggraini, 2016 said that the administration of MP ASI from an early age can be good for certain conditions, one of which is a baby with low birth weight (BBLR) because ASI has many benefits, but ASI alone is not enough to support optimal growth in infants with BBLR and for brain and nerve development. Therefore supporting multinutrition such as protein, minerals, vitamins, and others is highly recommended. In addition to breast milk to optimize growth and development in BBLR infants, it is necessary to provide LBW formula milk. A study shows that the frequency of breastfeeding plus BBLR formula milk has a significant correlation to the baby's weight gain.17 LBW Formula Milk contains: Energy 24 Kcal/Oz; Protein 2.2 g/100 ml; Fat 4.5 g/100 ml; carbohydrates 8.5 g/100 ml; and calcium 730 MEQ/L[17].

According to Lestari P, et al 2014 states that more nutrition that occurs in infants will interfere with the growth and development of the gross and fine motor motion of the baby which causes the baby to not be able to do movements that should have been done at that age. More nutrition at an early age can increase the risk of various health problems such as type 2 diabetes mellitus, glucose metabolism disorders, heart disease, blood vessel blockage and so on in adulthood later[18].

From the results of the study obtained a picture of the length of the body of the baby aged 0-6 months given exclusive breastfeeding and non-exclusive breastfeeding in the Rawasari Puskesmas was categorized based on PB/U anthropometric standard standard tables from 15 respondents there was a short category of 7%, respondents in the normal category of 93% and the same results in both groups of respondents.

According to Siti Maemunah and Ria Setia Sari in 2021 stated that the relationship between exclusive breastfeeding and growth in the length of the baby's body age 1-6 months is caused by breast milk is the main source of food for infants who have complete nutritional content needed in infant growth. The nutritional content in breast milk is better and fulfilling the baby's growth needs compared to formula milk8. Supported by Lamria Simanjuntak's research in 2020 in this study the body length of non-exclusive breastfeeding infants is greater than the length of exclusive breastfeeding infants and no significant difference between exclusive breastfeeding with non-exclusive breastfeeding, this can be seen from the value of Sig-P> 0.05[19].

CONCLUSIONS

Overview of baby weight aged 0-6 months given exclusive breastfeeding and non-exclusive breastfeeding at the Rawasari Puskesmas given exclusively there is a 7%less nutrition category, respondents with a more than 7%nutritional category and respondents in the good nutrition category as much as 86%. In non -exclusive breastfeeding infants from 15 respondents get a 7 %less nutrition category, respondents with a 26 %nutritional category and respondents in the good nutrition category

67 %. The picture of the length of the baby body aged 0-6 months given exclusive breastfeeding and non-exclusive breastfeeding in the Rawasari Puskesmas is categorized based on the standard table for PB/U antropometry of 15 respondents there is a short category of 7%, respondents with a normal category of 93% and the same results in both groups of respondents. Babies who are given additional food at the age of 0-6 months can make the baby become obesity or obesity

REFERENCES

1. Yulizawati, sst., m.keb rahmayani afrah, s.keb., b. Pertumbuhan dan perkembangan bayi dan balita. (pindomedia pustaka, siduarjo, 2022).
2. Kementerian kesehatan republik indonesia. Perbedaan pertumbuhan bayi usia 0-6 bulan yang diberi asi eksklusif dengan yang diberi susu formula di kecamatan ngawi. Riskesdas 2018 3, 103–111 (2018).
3. Dewi andriani. Perbandingan berat badan dan panjang badan pada bayi 0-6 bulan yang diberikan asi dengan bayi 0-6 bulan yang diberikan pasi di posyandu melati 2 kecamatan semapir surabaya. Sage encycl. Educ. Res. Meas. Eval. 3, 21–26 (2018).
4. Bulan, u., wilayah, d. I., puskesmas, k. & kota, l. Pengaruh pemberian asi eksklusif terhadap berat badan bayi usia 4-6 bulan di wilayah kerja puskesmas langsa kota. 3, 8–15 (2018).
5. Facilities, b. I. N. Protecting, promoting and supporting breastfeeding in facilities providing maternity and newborn services. (world health organization, 2017).
6. Bagaray, e. F., langi, f. L. F. G. & posangi,J. Derteminan pemberian asi eksklusif 24 jam terakhir pada bayi umur 0 - 6 bulan di indonesia. 9, (2020).
7. Dinkes provinsi jambi. Profil kesehatan provinsi jambi 2020. (2021).
8. Komunitas, j. K., pada, p. M. & bulan, b. Pemberian mp-asi pada bayi 0-6 bulan dan faktor- faktor yang berhubungan complementary feeding or infants aged 0-6 months and the related factors. 7, 176–181 (2021).
9. Izhar, e. Perbandingan antara perkembangan bayi usia 0-6 bulan yang diberi asi eksklusif dengan yang diberi susu formula di puskesmas kecamatan kebayoran baru 1. Izhar e. Perbandingan antara perkembangan bayi usia 0-6 bulan yang diberi asi eksklusif dengan yang dib. (2022).
10. Hera oktavia. Hubungan pemberian asi eksklusif dengan status gizi bayi usia 6-11 bulan di wilayah kerja puskesmas lingkar timur kota bengkulu. 3, 6 (2021).
11. Jumadillia. Perbandingan pemberian asi eksklusif dan non-eksklusif terhadap pertumbuhan bayi usia 7 – 12 bulan di wilayah kerja puskesmas ktk kota solok. (2018).
12. Zonyfar, c. Et al. Metodologi penelitian. (cv. Pena persada, jawa tengah, 2022).
13. Helwig, n. E., hong, s. & hsiao-wecksler, e.T. Metodologi penelitian. (gundarma ilmu, makassar, 2018)
14. Felix., i. G. P. Hubungan antara karakterisktik ibu dan pemberian asi eksklusif. J. Chem. Inf.

Model. 53, 1689–1699 (2013).

15. Nisa, z. H. Faktor-faktor yang berhubungan dengan ketidakberhasilan dalam pemberian asi eksklusif pada ibu yang memiliki bayi usia 0-6 bulan di klinik pratama spn polda metro jaya periode 06 juni 06 – 06 juli 2022.J. Ilm. Kesehat. Bpi 7, 50–59 (2023).
16. Rahayu, s., djuhaeni, h., nugraha, g. I. & mulyo, g. E. Hubungan pengetahuan, sikap, perilaku dan karakteristik ibu tentang asi eksklusif terhadap status gizi bayi. Action aceh nutr. J. 4, 28 (2019).
17. Anggraini, d. I. & septira, s. Nutrisi bagi bayi berat badan lahir rendah (bblr) untuk mengoptimalkan tumbuh kembang nutrition for low birth weight infant to optimize infant growth and development. Majority 5, 151–155 (2016).
18. Lestari, p., kartini, a. & suyatno, s. Hubungan praktik pemberian susu formula dengan status gizi bayi usia 0-6 bulan di kecamatan semarang timur kota semarang.J. Kesehat. Masy. 2, 339–348 (2014).
19. Simanjuntak, l. & simanjuntak, c. Perbandingan pertumbuhan bayi usia 6 bulan yang mendapat asi eksklusif dan non eksklusif di kecamatan sigumpar. J. Keperawatan hkbp balige 1, 1–12 (2020).