



Relationship between Exclusive Breastfeeding with Foods Intake and Nutritional Status of 6-to-12-Month-Old Children in Working Area of Hamadi Primary Health Care in the City Jayapura

Ribka Fransiska Youwe¹, Dary^{1,*}, Rifatolistia Tampubolon¹, Gelora Mangalik²

¹Department of Science in Nursing, Faculty of Medical and Health Science,
University of Kristen Satya Wacana

²Department of Science in Nutrition and Dietetics, Faculty of Medical and Health Science,
University of Kristen Satya Wacana

*E-mail: dary.dary@uksw.edu

Abstract

First nutritional intake supplied to newborn infants is exclusive breastfeeding because it contains a lot of nutrients and it is supplied for 6-month-old children without adding weaning foods. Global Nutrition Report (GNR) report in 2014 stated that Indonesia was included in 117 countries that had three highest nutritional problems in children, namely stunting (37.2%), wasting (12.1%), and overweight (11.9%). The result of Riskesdas prevalence in 2013 regarding to nutritional status of children in Papua Province was undernutrition (21.9%) while in Jayapura there were malnutrition (3.4%) for toddlers and undernutrition (17.8%). The purpose of the research was to analyze the relationship between exclusive breastfeeding with foods intake and nutritional status of 6-to-12-month-old children in the working area of Hamadi Primary Health Care in the city of Jayapura. Quantitative research methods with cross sectional study design using the spearman rank test were done which exclusive breastfeeding as independent variable, food intake and nutritional status as dependent variables. Statistical test results showed that there was no relationship between exclusive breastfeeding and nutritional status with parameter $p = 0.658$, there was no relationship between exclusive breastfeeding and food intake (TKE $p = 0.335$), (TKP $p = 0.626$), (TKL $p = 0.715$), (TKK $p = 0.980$), there was a relationship between food intake and nutritional status (TKE $p = 0.050$), (TKP $p = 0.041$), (TKL $p = 0.032$), (TKK $p = 0.049$). The conclusion of this research is either exclusive or non-exclusive breastfeeding children have the same nutritional status and food intake, while children's food intake affects nutritional status of children.

Keywords: Exclusive Breastfeeding, Foods Intake, Nutritional status of 6-to-12-Month-Old Children

■ Introduction

Nutritional status is a human body condition as the impact of foods and nutrition and it is typically measured by anthropometry method. Nutritional status of children relates to children growth, therefore, the parameter to detect children with undernutrition needed to be formulated [1]. For children, data interpretation is displayed in index, namely body length/age (BL/A), body height/age (BH/A), and body weight/age (BW/A) in order to obtain nutritional status of children based on z-score [2].

According to Global Nutrition Report (GNR) in 2013, there were 19.6% undernutrition toddlers and it had not reached Sustainable Development Goals (SDGs) target (2.9%). In 2014, Indonesia was included in 117 countries with three highest nutrition problems of children, namely stunting (37.2%), wasting (12.1%), and overweight (11.9%) [3]. In 2015, there were toddlers with malnutrition problem (14%) and undernutrition problem (17%). On the other hand, it was fewer rather than undernutrition children in 2013 (19.6%) [4].

In accordance with [5] in Jayapura City, there were malnutrition toddlers (3.4%), undernutrition toddlers (17.8%), good nutrition toddlers (76%), and over nutrition toddlers (2.8%). In line with Basic Research of Health (BRH) results [6], prevalence of nutritional status of toddlers in Papua Province based on BW/A category was divided into good nutrition status (79.8%) and undernutrition status (21.9%) [7]. Prevalence of malnutrition and undernutrition in Papua Province decreased from 19.6% (2015) to 7.7% (2016) [8]. In contrast, BRH results showed that undernutrition status increased to 15.7% in 2018 and good nutrition status for the rest. Prevalence number was adequately high rather than BRH data in 2018 in which comprised malnutrition (3.9%) and undernutrition (13.8%) [6].

Exclusive breastfeeding is first nutrition supplied for newborn infants because it contains a lot of nutrients. Children are breastfed exclusively for 6 months without adding weaning foods (WF) [9]. According to American Academy of Pediatrics in America, exclusive breastfeeding is exceedingly important to level up nutritional status by adding nutrition food for children. Exclusive breast milk is main nutrition which supplied from 0 to 6 months old and after 6 months, children can be supplied by

WF in line with their needs to grow. One of the purposes of exclusive breastfeeding is to escalate nutritional status of children by monitoring their weight addition [10].

In 2008, World Health Organization (WHO) suggested that all children had to be breastfed exclusively for first 6 months. In Indonesia, exclusive breastfeeding decreased from 55.7% (2015) to 29.5% (2016) [7]. Meanwhile, the infants with exclusive breastfeeding comprised 6,327 (30.8%) in Jayapura. Primary health care with the highest number of exclusive breastfeeding is Kotaraja primary health care (70.6%) and the lowest number is Tanjung Ria primary health care (20%), moreover, Hamadi primary health care has low number of exclusive breastfeeding as well (41.7%) [5].

Children from 6 to 12 months old must be supplied not only with exclusive breastfeeding but also WF in order to increase nutritional status of children. WF is a kind of nutritional supporting foods or beverages. It is because exclusive breast milk is only capable to fulfill partial nutrition for body. Children that are supplied WF after 6 months old have more proper nutritional status rather than children supplied WF since newborn [11]. Growth disorder of 6-to-12-month-old children is caused by poor quality of WF, therefore, it cannot reach daily energy intake of protein, carbohydrate, and fat [12].

In accordance with [13] breastfeeding scope in developing countries accounted for 46% and it was not corresponding to WHO target in 2025, namely increasing exclusive breastfeeding for early 6 months at least up to 50%. Increase of non-exclusive breastfeeding and decrease of exclusive breastfeeding happened in developed countries and developing countries included Indonesia [13]. According to the report of Agency of Health in Jayapura City (2012), WF are supplied to children from 6 to 23 months old in every primary health care in Jayapura City included Hamadi Primary Health Care [5].

According to problems description, it indicates that the problem is related to exclusive breastfeeding and food intake that causes nutritional status of 6-to-12-month-old children. Thus, this research focuses on identifying the relationship between exclusive breastfeeding and

foods intake with nutritional status of 6-to-12-month-old children in the working area of Hamadi Primary Health Care in Jayapura City.

■ Experimental

This research was done in the working area of Hamadi Primary Health Care in Jayapura City. It was held from May to June 2019. Research method used was quantitative method with cross sectional approach by concurrent observation between dependent variables with independent variables. The dependent variable is nutritional status while independent variable was exclusive breastfeeding and food intake. Population of this research were all mothers and their children (6–12 months old) in working area of Hamadi Primary Health Care (502 respondents). In accord with calculation result from Isaac and Michael, the number of sample used was 108 with simple random sampling [14].

$$\div S = \frac{\lambda^2 N \cdot P \cdot Q}{d^2(N-1) + \lambda^2 P \cdot Q}$$

Inclusion criteria in this research was mothers willing to be respondents and have children (6–12 months old). Exclusion criteria in this research was respondents that forgot when their children were born included date, month, and year and had congenital or chronic diseases which inhibit children growth.

Data collection period was done in May by interview and assisted by questionnaire method, therefore, primary data obtained directly from the respondents. Data collection of exclusive breastfeeding was done by distributing questionnaire to mothers that have 6-to-12-month-old children. Food intake data were obtained with the help of recall to obtain the results of the nutritional adequacy level in children. Valuation of nutritional status could be evaluated by nutritional status matrix, namely Kartu Menuju Sehat (KMS) book, therefore, researcher did not develop any method. Statistical analysis used spearman correlation analysis to test the hypothesis.

This research was conducted after receiving ethical clearance from Ethical Committee of Faculty of Medical and Health Science, University of Kristen Satya Wacana according to regulation

number: 136/PE/KEPK.UKSW/2019 and agreement and willingness of respondents by filling and signing informed consent.

■ Results and Discussion

This research was conducted in working area of Hamadi Primary Health Care, South Jayapura Sub-District, Jayapura City, Papua Province. It was located in three urban villages that comprised Numbay Urban Village, Argapura Urban Village, and Hamadi Urban Village with location point of primary health care of infants based on the urban villages and hamlets. Each urban village was located amid the land and the sea with temperature about 20–34°C. In line with demographical condition, it was placed by native tribe (Portnumbay) in Jayapura City, local tribe of Papua, Javanese tribe, Sulawesi tribe, and Sumatera tribe. In addition, the respondents consisted of local tribe of Papua (80%) and non-local tribe (20%). The results are displayed in tables to describe the characteristic of respondents, exclusive breastfeeding, foods intake, and nutritional status of 6-to-12-month-old children.

Data and Characteristics of Respondents in Working Area of Hamadi Primary Health Care in Jayapura City

Data and characteristics of respondents are displayed in Table 1.

According to Table 1, it can be summarized that 78 respondents (72.2%) gave birth with range 20–35 years old and 31 respondents with high-risk ages (<20 years old and >35 years old). Majority of mother work as entrepreneurs (47 respondents) and housewives (40 respondents) with income per month less than Rp500,000. Most of the respondents (98,1%) have been married. Educational stage of majority of respondents is Junior High School (50 respondents) and Senior High School (47 respondents). It is dominated by big-family category for their family type. Meanwhile, most of the data of child respondents were the first children of 45 respondents (41.6%) with the majority of girls as many as 60 respondents (55.5%).

Table 1 Distribution of Mother Respondent Characteristics

Characteristics	Frequency (n)	Percentage (%)
Age		
< 20 years old	7	6.4
20 - 35 years old	78	72.2
>35 years old	23	21.2
Occupation		
Civil Servant	3	2.7
Entrepreneur	47	43.5
Private Employee	1	0.9
Housewife	40	37
Others	17	15.7
Income per Month		
< 500,000	88	81.4
500,000 – 1,000,000	15	13.8
> 1,000,000	5	4.6
Marital Status		
Unmarried	1	0.9
Married	106	98.1
Divorcee	1	0.9
Educational Stage		
Primary School	8	7.4
Junior High School	50	46.2
Senior High School	47	43.5
University	3	2.7
Family Type		
Main Family	36	33.3
Big Family	70	64.8
Single Parent	2	1.8
Age of Giving-Birth Mother		
< 20 years old	7	6.4
20 - 35 years old	78	72.2
> 35 years old	23	21.2
Children Sequence		
First	45	41.6
Second	42	38.8
Third	13	12
Fourth	6	5.5
Fifth	1	0.9
Seventh	1	0.9
Children Gender		
Male	48	44.4
Female	60	55.5

Exclusive Breastfeeding for 6-to-12-Month-Old Children

Data of exclusive breastfeeding is presented in Table 2.

Table 2 Distribution of exclusive breastfeeding for 6-to-12-month-old children

Exclusive Breastfeeding	Frequency (n)	Percentage (%)
No	8	7.4
Yes	100	92.6
Total	108	100.0

Table 2 shows that 100 respondents (92.6%) supply exclusive breast milk and 8 respondents for the rest (7.4%) do not supply exclusive breast milk. Exclusive breast milk is important supplement for infants (0–6 months old) that contains various nutrition. For newborn infants, exclusive breast milk is first supplement for their lives [15]. To sum up, majority of respondents in this research are exclusive-breastfeeding mothers in productive age (20–35 years old).

Nutritional Status of 6-to-12-Month-Old Children based on BW/A Index

Data of nutritional status of 6-to-12-month-old children is presented in Table 3.

Table 3 Distribution of Nutritional Status of 6-to-12-Month-Old Children based on BW/A Index

Nutritional Status	Frequency (n)	Percentage (%)
Under Nutrition	42	38.8
Good Nutrition	65	60.1
Over Nutrition	1	0.9
Total	108	100.0

Table 3 displays the result of anthropometry measurement of children (6 – 12 months old) in z-score BW/A that indicates there are 65 children (60.1%) have good nutrition status, 42 children (38.8%) have undernutrition status, and 1 child (0.9%) has over nutrition status. It can be concluded that majority of respondents in this research have good nutrition status. Average of z-score BW/A is -0.11 ± 0.66 SD that the lowest z-score is -3.83 SD and the highest z-score is 2.6 SD.

Nutritional status is a human body condition as the impact of foods intake and nutrition consumption. Nutritional status is divided into some indicators, one of them is body weight based on age (BW/A) that can be categorized into malnutrition, undernutrition, good nutrition, and over nutrition [2].

Foods Intake of Children based on Recommended Dietary Allowances

Data of foods intake of children based on Recommended Dietary Allowances (RDA) is presented in Table 4.

Table 4 Distribution of Foods Intake of Children based on RDA

Variables	Frequency (n)	Percentage (%)
Energy		
Recommended Allowances (REA)		
Over >119%	23	21.2
Good 100 - 119%	72	66.6
Under < 100%	13	12
Protein		
Recommended Allowances (RPA)		
Over >119%	28	25.9
Good 100 - 119%	64	59.2
Under < 100%	16	14.8
Fat		
Recommended Allowances (RFA)		
Over >119%	15	13.8
Good 100 - 119%	84	77.7
Under < 100%	9	8.3
Carbohydrate		
Recommended Allowances (RCA)		
Over >119%	49	45.3
Good 100 - 119%	58	53.7
Under < 100%	1	0.9

Table 4 shows the calculation results of children's food intake obtained from recall to determine the RDA as a percentage. Majority of children have good RDA indicated by REA (66.6%), RPA (59.2%), RFA (77.7%) dan RCA (53.7%).

Foods intake consists of energy, carbohydrate, protein, and fat intake. It can be reviewed by calculating foods intake and comparing the calculation with RDA of 6 – 12 month old as the recommendation (Supariasa, 2012).

If the RDA after being calculated is <100%, it means that the food intake given is still insufficient, if the RDA of 100 - 119% the food intake is still good and if the RDA > 119% the adequate level of food intake is more.

Relationship between Exclusive Breastfeeding with Nutritional Status of 6-to-12-Month-Old Children based on BW/A Index

The results of spearman correlation analysis show that parameter $p = 0,658 > 0,05$ which means there is no significant relationship between exclusive breastfeeding and nutritional status of 6-to-12-month-old children based on BW/A index. Both exclusive breast milk and formula milk do not affect significantly nutritional status of children because of other factors. Most of exclusive breastfeeding children have good nutritional status, namely 65 of 100 children (60.1%).

Table 5. Result of Statistic Analysis with Spearman Test

Correlations			Exclusive Breastfeeding	Nutritional Status
Spearman's rho	Exclusive Breastfeeding	Correlation Coefficient	1,000	,043
		Sig. (2-tailed)	.	,658
		N	108	108
	Nutritional Status	Correlation Coefficient	,043	1,000
		Sig. (2-tailed)	,658	.
		N	108	108

Under and over nutritional status directly are caused by breast milk and weaning food and infectious diseases existence. Weaning food feeding must be in precise time because if it is either earlier or later, it will affect children health, for instance, nutritional problem of children [16].

It is in line with the research by [17] in West Motoling that stated there was no relationship between exclusive breastfeeding and nutritional status based on BW/A index of children (6–12 months old). Exclusive breast milk is not the only main factor to affect nutritional status because there are other factors significantly influence nutritional

status of children [18]. According to observation results, majority of mothers actively participate in primary health care to learn how to escalate nutritional status of children. It is in accord with [12] that shows that there is significant relationship between mother's knowledge with nutritional status of children in Pandan Indah Village, Praya Daya Sub-District, Central Lombok District, West Nusa Tenggara. In a nutshell, exclusive breastfeeding does not affect nutritional status of children based on BW/A.

Relationship between Exclusive Breastfeeding with Foods Intake (Energy, Protein, Fat, and Carbohydrate)

A lot numbers of undernutrition cases in the world primarily happens because of energy, protein, fat, and carbohydrate intake deficiency, therefore, WHO made several principles regarding to foods intake for children. Moreover, exclusive breastfeeding is immensely important for newborn infants. After 6 months old, exclusive breastfeeding must be balanced with weaning foods [19].

Table 6 Relationship between Exclusive Breastfeeding with Foods Intake (Energy, Protein, Fat, and Carbohydrate)

Variabel	Breastfeeding		P Value*)
	Yes	No	
REA	100	8	0,335
Over			
Good			
Under			
RPA	100	8	0,626
Over			
Good			
Under			
RFA	100	8	0,715
Over			
Good			
Under			
RCA	100	8	0,980
Over			
Good			
Under			

Table 6 shows that there is no relationship between exclusive breastfeeding with recommended energy allowances ($p = 0,335 > 0,05$). It means either children have exclusive or non-exclusive breast milk have the same recommended energy allowances. Even though nutrition in breast milk and weaning food is different, the amount of energy released is the same. Mostly, recommended energy allowances is in good level for 72 children (66.6%) and 100 children (92.6%) have exclusive breastfeeding since newborn. The results are confirmed by recall (1×24 hours) method which state that children largely consume exclusive breast milk three times per day and the feeding frequency of weaning food is the same, thus, energy intake from both sources is supplied properly.

The results are in line with [20] research as well in Mojokerto that there was no relationship between exclusive breastfeeding and energy intake of children. It implies that exclusive breast milk is not the only factor that affects energy intake of children because there are other strong factors can be seen by characteristic of respondents, namely majority of mothers have educational stage at Junior High School with middle-level knowledge. Surprisingly, those mothers are capable to explain energy source from weaning food consumed by their children such as porridge, biscuit, and other energy intake with income less than Rp.500,000. The highest number of family type of respondents is big-family type that family members tend to take care of foods intake of children and it is possible for mother to purchase foods with optimal quality and quantity. Therefore, exclusive breastfeeding does not affect to recommended energy allowances of children.

In Table 6, it describes that there is no relationship between exclusive breastfeeding with recommended protein allowances with parameter $p=0,626>0,05$. It means that children either with exclusive or non-exclusive breast milk since newborn have good-level recommended protein allowances. Protein intake from exclusive breast milk and weaning food truly contains of nutrition and metabolism process is different from each other, surprisingly, both of them do not have any impact to recommended protein allowances. According to research data about recommended protein allowances, 64 children are categorized in good level (59.2%) and majority are breastfed exclusively since newborn that accounts for 100 children (92.6%).

It is in accordance with (Kusuma et al, 2018) that stated there was no relationship between exclusive breastfeeding with protein intake. Exclusive breastfeeding is not the only factor that influences protein intake level because there are other factors such as family type which refers to big-family type for majority. Family members of big family tend to care more about protein intake of children with mother's income less than Rp. 500,000 that mother possibly buy high-protein weaning food such as formula milk, fish, and egg, then recommended protein allowances is fulfilled optimally. It can be

summarized that there is no relationship between exclusive breast milk with recommended protein allowances for children because children either with exclusive breast milk or non-exclusive breast milk

In Table 6, it indicates that there is no relationship between exclusive breastfeeding with recommended fat allowances with parameter $p=0.715>0.05$. It means either children have exclusive or non-exclusive breast milk have the same recommended fat allowances. Exclusive-breast-milk children have nutrition in fat form to be easily absorbed by body. On the other hand, children with weaning food since newborn have proper fat intake as well. Research data shows that majority of children have proper fat intake for 84 children (77.7%) and 100 children have exclusive breast milk since newborn (92.6%).

It is in accordance with research by [21] that implied there was no relationship between exclusive breastfeeding and fat intake. Exclusive breastfeeding is not the only factor affecting fat intake for children. Recommended fat allowances for children can be affected by other factors according to characteristic respondents such as mother's income (less than Rp. 500,000). According to mothers' interview results, they are willing to fulfill partial fat intake that come from formula milk, biscuits, and rice porridge. Based on educational stage of mothers, majority of mothers were ended in Junior High School, nonetheless, their knowledge about weaning food (full of fat intake) is appreciable. Their profession mostly are vegetables, fish, and sago sellers, thus, their children consume weaning food as the materials their mother sell then it affects fat intake of children. It can be summarized that either children with exclusive or non-exclusive breast milk since newborn do not affect their recommended fat allowances.

Table 6 indicates that there is no relationship between exclusive breastfeeding with recommended carbohydrate allowances with parameter $p=0.715>0.05$. It means that children either with exclusive or non-exclusive breast milk have the same recommended carbohydrate allowances. For first 6 months, children with exclusive breast milk have optimal recommended carbohydrate allowances as the same as non-exclusive-breast-milk children since newborn

nevertheless they were supplied by weaning food such as formula milk or rice porridge. According to the results, majority of children have been categorized in good recommended carbohydrate allowances for 58 children (53.7%) and 100 children have exclusive breast milk since newborn (92.6%).

It is in line with research by (Dini, 2017) that suggests there was no relationship between exclusive breastfeeding with carbohydrate intake. Exclusive breast milk is not the only factor affecting carbohydrate intake for children. Other factors can be viewed from family type, educational stage of mothers, and mothers' income. Majority of mothers come from big family with proper knowledge and sufficient income, therefore, their family are familiar about carbohydrate intake for children to fulfill their needs. To sum up, children either with exclusive or non-exclusive breastfeeding do not influence their recommended carbohydrate allowances.

Relationship between Foods Intake (Energy, Protein, Fat, and Carbohydrate) with Nutritional Status of 6-to-12-Month-Old based on BW/A Index

Nutritional status is a human body condition as the impact of foods consumption and nutrition usage as the consequence of balance of nutritional intake and needs. Nutritional intake for children consist of energy, protein, fat, and carbohydrate as can be evaluated by calculating the intake and comparing with Recommended Dietary Allowances (RDA) from 6 months to 1 year old as suggested [22].

Table 7 shows that there is significant relationship between recommended energy allowances with nutritional status of children by parameter $p = 0.050 < 0.05$. It means optimal recommended allowances greatly affects nutritional status of children. Energy intake is affected by carbohydrate intake which means if energy intake is supplied in low level, carbohydrate intake will be in low level. If children lack of energy, their body weight will decrease, therefore it will affect nutritional status of children based on BW/A. According to research data, 72 children (66,6%) have normal

recommended energy allowances and 65 children (60,1%) have normal nutritional status.

Table 7 Relationship between Foods Intake (Energy, Protein, Fat, and Carbohydrate) with nutritional Status of 6-to-12-Month-Old based on BW/A Index.

Variabel	Nutritional status			P Value*)
	Under Nutrition	Good Nutrition	Over Nutrition	
REA	42	65	1	0,05
Over				
Good				
Under				0,041
RPA	42	65	1	
Over				
Good				0,032
Under				
RFA	42	65	1	
Over				0,049
Good				
Under				
RCA	42	65	1	0,049
Over				
Good				
Under				

It is in accord with research by [23] that there was significant relationship between energy intake with nutritional status of children in working area Selogiri Primary Health Care that implied the more optimal energy intake is, the more optimal nutritional status of children is. Energy intake is important needs to increase body weight, increase growth, activate physical activities, and increase body immunity. It can be concluded that energy intake truly influences nutritional status of children based on BW/A.

Table 7 shows that there is significant relationship between recommended protein allowances with nutritional status of children by parameter $p = 0.041 < 0.05$. Protein intake immensely contributes to nutritional status of children. Based on research data, 64 children (69,2%) have optimal protein intake and 65 children (60,1%) have optimal nutritional status. It is supported by recall method (1×24 hours) that averagely children consume vegetables, fermented soybean, and other protein sources for 1–2 times/day, therefore, protein intake of children is sufficiently fulfilled. Protein is second important element after water that acts as enzyme and hormone to build and maintain body tissues. If body human lack of energy sources (carbohydrate

and fat), protein will be the replacement to build energy.

It is in line with research by [24] that stated there was relationship between protein intake with nutritional status of children based on BW/A. Deficiency of protein intake can inhibit tissues and organs growth that affects to body weight. In a nutshell, protein intake highly affects nutritional status of children based on BW/A.

Table 7 shows that there is significant relationship between recommended fat allowances with nutritional status of children by parameter $p = 0.032 < 0.05$. It indicates that fat intake highly influences nutritional status of children. Majority of children have good food intake for 64 children (69.2%). According to interview results, children tend to consume formula milk, rice porridge, fish, and vegetables that contain fat. In addition to fat from those sources, weaning food is another source to fulfill fat for children. Fat is an element to increase energy amount which stay longer in digestive system rather than protein and carbohydrate [7].

It is different from research by (Virmand dkk, 2016) that stated fat intake does not have relationship with nutritional status of children based on BW/A. Fat intake of 6-to-12-month-old children is majorly good (60.1%). Vegetables, fruits, and formula milk are fat sources for children. It can be summarized that recommended fat allowances truly influence nutritional status of children based on BW/A.

Table 7 shows that there is significant relationship between recommended carbohydrate allowances with nutritional status of children by parameter $p = 0.049 < 0.05$. It means carbohydrate intake highly influences nutritional status of children. Carbohydrate intake is 60% energy source of all intake from other sources as suggested. Based on research data, carbohydrate intake of 58 children (53.7%) is in adequately optimal and 65 children have good nutritional status (60.1%). According to recall-method interview (1×24 hours), children tend to consume papeda (from sago), vegetables porridge, and biscuits. Carbohydrate is one of the energy sources for body and must be available in adequate amount because it will cause body weight. Carbohydrate can be obtained from milk, rice, porridge, and vegetables [25].

It is in accordance with research by [24] that implied there was significant relationship between carbohydrate intake with nutritional status of children based on BW/A by parameter $p = 0.024$. If children lack of carbohydrate, it will cause energy deficiency and decrease of body weight that indirectly affect to nutritional status of children and their growth is inhibited. Foods consumption from various sources can decrease the risk of nutritional deficiency for children. It can be concluded that carbohydrate intake truly affect nutritional status of children based on BW/A.

■ Conclusion

According to research results, it can be summarized that there is no relationship between exclusive breastfeeding with foods intake and nutritional status of 6-to-12-month-old children. On the other hand, there is relationship between foods intake with nutritional status of 6-to-12-month-old children. Either exclusive or non-exclusive breastfeeding children have the same nutritional status. In addition to exclusive breastfeeding, weaning foods as the sources of energy, protein, fat, and carbohydrate significantly affect nutritional status of children. Even though there are partial numbers of children did not have exclusive breastfeeding since newborn, the nutrients are sufficient by quality of weaning foods.

It is suggested to increase the numbers of counseling of Primary Health Care to mothers about the importance of foods intake refers to weaning foods that contain of energy, carbohydrate, protein, and fat for children in order to maintain nutritional status optimally.

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