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Analysis of Factor Affecting Nutrition Status on Children

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Abstract

The problem of malnutrition remains overlooked in Indonesia, especially on children, caused by various factors. Indonesia is the 17th country with 3 nutrition problems, including stunting (short body), wasting (skinny body), and overweight (obesity). This research aims to analyze factors affecting nutrition status on children in the area of West Java Province, including the mother's and the child's socio-demographics factor, and the child's health status. The research method was descriptive quantitative with cross-sectional approach. The number of samples is 810. The research was conducted in 6 districts that support Family Planning (KB), including Bandung District, Bandung City, West Bandung District, Subang District, Sumedang District, and Garut District. The quantitative analysis consisted of univariates using percentage and frequency distribution, as well as bivariate analysis using chi square test. The result of the research shows that nearly all toddlers have good nutrition status as much as 87.9%, and toddlers with malnutrition as much as 10.6%. The analysis factor shows that there is a relationship between the mother's age (p = 0.048; OR = 1.583), family income (p = 0.010; OR = 1.803), delivery complications (p = 0.008; OR = 2.091), provision of exclusive breastfed milk (ASI) at the age of 0–6 years old (p = 0.000; OR = 2.321), provision of exclusive breast milk and complementary feeding given to babies before 6 months old (MPASI) at the age of 6 months to 2 years old (p = 0.002; OR = 2.037), and the child's history of hospitalization (p = 0.008; OR = 2.055), while other factors are considered irrelevant. This research suggests that healthcare staff collaborate in providing knowledge to mothers on the provision of exclusive breast milk and complementary feeding as well as the prevention of illness on their children.

Keywords: Children, factor affecting nutrition status, nutrition status.

Introduction

The problem of low-quality citizenship is indicated by, out of many others, the prevalence of nutrition affecting the quality of human resources. This will lead to the loss of young generations and the nation's future economy (Fotso et al., 2012). One of WHO's SDG targets is preventing hunger. In 2025, such problems of malnutrition are expected to be solved.

Indonesia is one of the developing countries with a quite serious malnutrition problem. Few others also face similar problems due to improper food provision (Ningsih, Kristiawati, & Krisnana, 2014). Data from WHO (2010) discovered that 1.5 million children have died due to improper food provision and 90% of the cases occur in developing countries. Today, malnutrition remains a national problem unattended, especially on toddlers. This is because toddlers have a relatively fast growth, thus requiring the biggest portion of nutrition compared to other stages of development (Ningsih, Kristiawati, & Krisnana, 2014).

Global Nutrition Report (USAID, 2014) claimed that Indonesia is the 17th country with 3 main malnutrition problems to date, including stunting (short body), wasting (skinny body), and overweight (obesity). Data from Basic Health Research (Riskesdas) (2013) show that the prevalence of fat body at the age of 0-59 months, according to weight/height, is 11.8%. Meanwhile, data from Nutrition Status Monitoring (Pemantauan Status Gizi (PSG)) claim that the prevalence of fat toddlers in Indonesia with similar measurements reaches 5.3% (Kementerian Kesehatan Republik Indonesia, 2016). Data from Riskesdas (2013) also discovered that today's Indonesian children are suffering from malnutrition, knowing that 8 out of 100 children are obese. This prevalence is based on the index measurement of body mass divided by age on children aged 5–12 years old as much as 8%. WHO (2010) thinks that malnutrition is not a problem in a country if that country has a fat-toddler indicator above 5%.

Problems of nutrition are pertinent to a child lacking of nutrition at early age, impacting to his cognitive disabilities and behavior deceleration. A child's cognitive growth may also be affected by the resultant interaction between his brain and his environment. It also affects his intelligence, analytical thinking, and productivity level. Lack of nutrition in this age may be relevant to the risk of chronic disease such as obesity, heart and vein disease, hypertension, and diabetes. Parents, therefore, are responsible for providing adequate nutrition intake to support their child's cognitive development (Ministry of Health (Kemenkes RI), 2017; Mohd Nasir et al., 2012). It is one of the fundamental factors affecting the cognitive performance as a defense mechanism to nerve building and brain development (Kementerian Kesehatan Republik Indonesia, 2017; Mohd Nasir et al., 2012).

The nutrition status during the 1000 first days of birth (HPK), or also known as "heydays", will impact on the qualities of a child's health, intellect, and productivity in the future (USAID, 2014; Kementerian Kesehatan Republik Indonesia, 2013). Mothers and babies must have adequate and quality nutrition to ensure their own health and motoric, social, and cognitive abilities, as well as learning skills in the future. Children with malnutrition during their heydays will likely to face neurological issues, a decrease in learning abilities, a higher chance of dropping out from school, barriers in productivity and working motivation, a decrease in the ability of providing nutritious food, and a decrease in caretaking. These all will further result in the prevalence of malnutrition and poverty for more generations to come. Considering the importance of nutrition during heydays, prevention of nutrition problems, therefore, becomes the main priority to improve the life quality of future generations (Bappenas RI, 2012).

The efforts of prevention of nutrition problems must be adjusted with the collateral factors (Aridiyah, Rohmawati, & Ririanty, 2015). The causing factor is directly from the child's unbalanced eating pattern and contagious illness. On the other hand, indirect factors include food availability, environment sanitation, and upbringing such as eating pattern, provision of knowledge, behavior, skills, and healthcare service (Arifin, 2016; Kementerian Kesehatan Republik Indonesia,

2017; Subarkah, Nursalam, & Rachmawati, 2016). This research aims to analyze factors that affect a child's nutrition status as seen by the mother's and the child's socio-demography, and the child's health status.

Method

This research is a descriptive quantitative research utilizing a cross-sectional approach. The population in this research is Productive Couples (PUS) with such criteria as pregnant mother (first to third trimester) and/or mothers with toddlers. These samples were taken from 6 districts in the province of West Java. The determination of districts for sampling in this research is done based on the highest number of occurrence of malnutrition in West Java (Bappenas RI, 2012). The districts include Bandung District, Bandung City, Garut District, West Bandung District, Subang District, and Sumedang District with the total of population as much as 534,652 respondents. The minimal number of samples is based on the number of population according to the table of sample determining by Isaac and Michael with 1% significance rate and the total of population as many as ±550,000. Therefore, the minimal number of samples is 665-810. The number of samples used in this research is 810 respondents. Data collection is carried out by enumerators by visiting respondents to each district. Filling in the questionnaire by the respondent was accompanied by enumerators.

Sampling technique is done using cluster sampling from 6 district consisting of 6 villages that support KB; therefore, each village is represented by 135 respondents in each. In this research, 810 respondents from 6 KB villages in 6 districts in West Java. Out of 810 respondents, 735 of which are toddlers and mother with toddlers (89.3%), pregnant mother (8.2%) or 67 people, and pregnant woman with toddlers (2.5%) or approximately 20 people.

Data were collected by using questionnaire to measure: individual factors, consisting of the mother's history of pregnancy and medical records; socio-demographic factors, consisting of gender, age, education level, occupation, family income, health insurance, healthcare access, and behavior, including the family's knowledge and action in its sustainability, the effort of nutrition fulfillment on pregnant mother, antenatal check-up and secure delivery, exclusive breast milk provision, effort of nutrition fulfillment on toddlers, immunization provision, growth and development, and healthy life behavior on families (PHBS). Besides, sampling was also done by running through medical records taken from the Book of Mother and Child's Health to observe the health status of the mother and the child (nutrition problems, pregnant mother's anemia, a high-risk pregnancy), physical observation with anthropometry to observe nutrition status on toddlers classified as adequate nutrition, lack of nutrition, malnutrition, or over nutrition.

Data analysis was done using Chi Square and Spearman analysis to observe factors affecting nutrition status on children. Research relevant to humans must be done according to ethical principles. According to Polit and Beck (2008), researcher must provide protection toward individual rights involved in the nurse's research. Therefore, this research has guaranteed ethical consentment from research Ethical Committee Universitas Padjadjaran, with letter number: 1206/UN6/KEP/EC/2018. The implementation of this research was done using 3 months from October to December 2018.

Results

Table 1 Nutrition Status of Toddlers based on Weight/Age

Nutrition Status	Frequency (f)	Percentage (%)
Malnutrition	6	0.8
Lack of Nutrition	72	9.8
Adequate Nutrition	646	87.9
Over Nutrition	11	1.5

Table 2 Nutrition Status on Toddlers based on Distribution per District

Nutrition Status Indicator	Bandung City		Bandung District		West Bandung District		Subang District		Sumedang District		Garut District	
	f	%	f	%	f	%	f	%	f	%	f	%
Based on Weight/Age:												
Malnutrition	2	1.6	0	0	0	0	1	0.8	3	2.6	0	0
Lack of Nutrition	11	8.5	22	17.1	7	5.7	19	15.3	8	7	5	4.3
Adequate Nutrition	114	89.1	106	82.1	116	94.3	99	79.9	102	88.7	109	94
Over Nutrition	1	0.8	1	0.8	0	0	5	4	2	1.7	2	1.7

Table 3 Mother's Socio-Demographic Factor

Factors	Frequency (f)	Percentage (%)
The mother's age		
Early teens 12-16 years old	276	34.5
Late teens 17-25 years old	378	47.2
Early adults 26-35 years old	141	17.6
Late adults 36-45 years old	6	0.7
The mother's education level		
Elementary school	236	29.5
Middle school	328	40.9
High school	200	25.1
Diploma	10	1.2
Undergraduate	26	3.2
Postgraduate	1	0.1
Mother's Occupation		
Unemployed	647	80.8
Farmer	62	7.7
Private Employee	48	6.0
Self-Employed	31	3.9
Civil Servant	3	0.4
Others	10	1.2
Father's Occupation		
Unemployed	10	1.2
Farmer	90	11.2
Private Employee	208	26.0
Self-Employed	396	49.5
Civil Servant	40	5.0
Others	57	7.1
Family income		
IDR 1,500,000	365	45.6
IDR 1,500,000-2,500,000	271	33.8

IDR 2,500,000	165	20.6
Family Spending		
IDR 1,500,000	315	39.3
IDR 1,500,000-2,500,000	332	41.5
IDR 2,500,000	154	19.2
Health Insurance		
Negative	282	35.2
Positive	519	64.8
Access to Health Service		
Difficult	59	7.4
Easy	742	92.6
Caretaker		
Mother	604	75.4
Grandmother/Grandfather	153	19.1
Sibling	40	5.0
Creche	3	0.4
Help	1	0.1
KB Acceptor		
No	146	18.2
Yes	655	81.8
Types of KB		
Injection	440	67.2
IUD	68	10.4
Piil	105	16.0
Condom	5	0.8
Implant	24	3.7
MOW	12	1.8
Mikrogi	1	0.1
KB Information from Healthcare Staff		
Negative	35	4.4
Positive	766	95.6
Mother's Nutrition Status		
Very Skinny	25	3.1
Skinny	61	7.6
Normal	379	47.3
Overweight	180	22.5
Obese	156	19.5
Pregnancy Status		
Not Pregnant	715	89.3
Pregnant	86	10.7
Mother's History of Contagious Illnesses		

Negative	779	97.3
Positive	22	2.7
Mother's History of Chronic Illnesses		
Negative	768	95.9
Positive	33	4.1

Table 4 Relationship between Mother's Factor and Child's Nutrition Status

		Nutrition Status (Weight/Age)		p value	OR
		Malnutrition	Adequate		
Education Level	Middle school and under	61	452	0.783	0.935
		11.9%	88.1%		
	High school and higher	28	194		
		12.6%	87.4%		
Age	> 34 years old	36	53	0.048	1.583
		15.7%	23.0%		
	≤ 34 years old	194	452		
		38.4%	89.5%		
Number of Children	>2 children	18	137	0.831	0.942
		11.6%	88.4%		
	≤ 2 children	71	509		
		12.2%	87.8%		
Occupation	Employed	18	129	0.955	1.016
		12.2%	87.8%		
	Unemployed	71	517		
		12.1%	87.9%		
Income	≤ IDR 1,500,000	52	283	0.010	1.803
		15.5%	84.5%		
	> IDR 1,500,000	37	363		
		9.3%	90.8%		
Spending	≤ IDR 1,500,000	40	241	0.166	1.372
		14.2%	85.8%		
	> IDR 1,500,000	49	405		
		10.8%	89.2%		
Health Insurance Possession	Negative	34	227	0.572	1.141
		13.0%	87.0%		
	Positive	55	419		
		11.6%	88.4%		
Access to Healthcare Service	Difficult	5	54	0.376	0.653
		8.5%	91.5%		
	Easy	84	592		
		12.4%	87.6%		

KB Acceptors	Negative	14	79	0.353	1.340
		15.1%	84.9%		
	Yes	75	567		
		11.7%	88.3%		
Mother's Nutrition Status	Not Normal	42	349	0.227	0.760
		10.7%	89.3%		
	Normal	47	297		
		13.7%	86.3%		
Delivery Complications	Positive	21	83	0.008	2.091
		20.2%	79.8%		
	Negative	68	562		
		10.8%	89.2%		
Delivery Complications	Non-Healthcare Staff	7	47	0.842	1.088
		13.0%	87.0%		
	Healthcare staff	82	599		
		12.0%	88.0%		
Delivery Process	Special delivery	10	69	0.874	1.059
		12.7%	87.3%		
	Normal delivery	79	577		
		12.0%	88.0%		
History of Contagious Illnesses	Positive	3	20	0.889	1.092
		13.0%	87.0%		
	Negative	86	629		
		12.1%	87.9%		
History of Chronic Illnesses	Positive	3	30	0.588	0.716
		9.1%	90.9%		
	Negative	86	616		
		12.3%	87.7%		

Table 5 The Child's Demography and Health Status Factor

Factor	Frequency (f)	Percentage (%)
Gender		
Male	386	52.5
Female	349	47.5
Age		
Toddlers	733	99.7
Children	2	0.3
Immunization Completeness		
Non-Immunized	17	2.3
Partial Immunization	102	13.9
Complete Immunization	616	83.8
Immunization Schedule		

Not Immunized	17	2.3
Misscheduled Immunization	118	16.1
On-time Immunization	600	81.6
Status of Exclusive Breast Milk 0-6 Months		
Exclusive Breast Milk and Complementary Feeding	59	8.0
Exclusive Breast Milk and Formula Milk	117	16.0
Exclusive Breast Milk	555	75.5
Only Formula Milk	4	0.5
Status of Exclusive Breast Milk 6 Month-2 years old		
Exclusive Breast Milk, Formula Milk, Complementary Feeding (No)	150	20.4
Formula Milk and Complementary Feeding (No)	61	8.3
Exclusive Breast Milk and Complementary Feeding (Yes)	524	71.3
Age During Which Complementary Feeding is Given		
0 Month	2	0.3
1 Month	3	0.4
2 Month	4	0.5
3 Month	8	1.1
4 Month	19	2.6
5 Month	12	1.6
6 Month (suitable)	643	87.6
7 Month	33	4.5
8 Month	8	1.1
9 Month	1	0.1
10 Month	1	0.1
12 Month	1	0.1
History of Hospitalization		
Negative	624	84.9
Positive	111	15.1
Child's Medical Records		
Negative	649	88.4
TBC	18	2.4
ISPA/Pneumonia	45	6.1
Other Illnesses	23	3.1

Table 6 Relationship between Child's Health Status and Child's Nutrition Status

		Nutrition Status (Weight/Age)		p value	OR
		Malnutrition	Adequate		
Gender	Male	43	343	0.398	0.826
		11.1%	88.9%		
	Female	46	303		
		13.2%	86.8%		
Immunization Completeness	Partial	11	108	0.297	0.703
		9.2%	90.8%		
	Complete	78	538		
		12.7%	87.3%		
Immunization Schedule	Miss scheduled	15	119	0.720	0.898
		11.2%	88.8%		
	On-time	74	527		
		12.3%	87.7%		
Exclusive Breast Milk 0 – 6 Month	Non Exclusive Breast Milk	35	141	0.000	2.321
		19.9%	80.1%		
	Exclusive Breast Milk	54	505		
		9.7%	90.3%		
Exclusive Breast Milk and Complementary Feeding 6 Month – 2 years old	Negative	38	173	0.002	2.037
		18.0%	82.0%		
	Positive	51	473		
		9.7%	90.3%		
Start of Complementary Feeding	Unsuitable	14	78	0.330	1.359
		15.2%	84.8%		
	Suitable	75	568		
		11.7%	88.3%		
History of Hospitalization	Positive	22	89	0.008	2.055
		19.8%	80.2%		
	Negative	67	557		
		10.7%	89.3%		
Medical Records	Positive	13	73	0.360	1.343
		15.1%	84.9%		
	Negative	76	573		
		11.7%	88.3%		

Based on the table above, the nutrition status overall based on weight/age in 6 districts in nearly all cities are adequate (87.99%), but malnourished children reach up to 10.6%.

Seen from weight/age of the toddler's nutrition status (table 2) in 6 districts, nearly all of them have adequate nutrition, which is in Bandung City as much as 89.1%, Bandung District, 82.1%, Bandung Barat

District 94.3%, Subang District 79.9%, Sumedang District 88.7%, and Garut District 94%. However, Table 2 shows problems of malnourished toddlers. Out of 6 districts, 3 districs have malnourished and nutrition-lacking children from more than 10%, including Bandung City 10.1%, Bandung District 17.1%, and Subang District 16.1%. On the other hand, the 3 remaining districts have the percentage below 10%, including Sumedang District 9.6%, Garut District 4.3%, and West Bandung District 5.7%. Bandung District and Subang District are the 2 areas with the biggest portion of malnutrition cases, as much as 17.1% and 15.3%, respectively. The biggest number of malnutrition cases occurs in Sumedang District as much as 3.6%, followed by Bandung City 2.6%. Seen from above, Bandung District has the highest percentage for toddlers lacking of nutrition out of the 6 districts.

Overall, the prevalence of malnourished and nutrition-lacking nutrition in this research reaches up to 10.6%. The distribution of the nutrition status for toddlers each district can be seen in this table 2.

Table 3 above shows that the mother's age is highly varying, 47.2 mothers are aged 17-25 years old, 40.9% others are junior high school graduates, 80.8% others are unemployed, thus they take care of their own children 75.4%. The father's occupation is varying, but mostly are private employees 49.5% with average income lower than 1,500,000 rupiahs. The average family spending is not parallel with family income. As much as 41.5% of family spending is bigger than that of the income (1,500,000 rupiahs – 2,500,000 rupiahs). As much as 64.8% of all families have health insurance and 92.6% of which have easy access to healthcare service. As much as 81.8% of mothers have used family planning and 67.2% of mothers use injection KB, while 9.6% get information about KB from healthcare staff. The mother's nutrition status is also varying, around 47.3% have adequate nutrition, and 3.1% lack of nutrition. As much as 89.3% of them are non-pregnant woman, 97.3% mothers do not have contagious illness history, and 95.9% mothers do not have history of chronic diseases.

Table 4 shows that the mother's socio-demographic factors are relevant to the nutrition status is the mother's age, family income, and delivery complications (p value < 0.05), while other factors are considered irrelevant. Based on the OR value, it is found out that mothers above 35 years old carry the risk of having malnourished children 1.583 times bigger than those aged under 35 years old. In terms of family income, families having income less than 1,500,000 rupiahs carry the risk of having malnourished children 1,803 times bigger than those earning more than 1,500,000 rupiahs. On the other hand, mothers who have a history of delivery complications carry the risk of having malnourished children 2,091 times bigger than those who do not.

Table 5 shows that there are 386 male children (52.5%). Nearly all children are toddlers (99.7%). Based on Immunization status, nearly all children get complete Immunization (83.8%), and nearly all get on-time Immunization (81.6%). Besides, all children get exclusive breast milk 75.5%). Most respondents get complementary feeding after the child is 6 month old (71.3%) and nearly all respondents get complementary feeding after the child is 6 month old (87.6%). On the other hand, based on the child's health status, nearly all children have never been hospitalised (84.9%), and nearly all of them do not have any history of contagious illness (88.4%).

The table above shows the relationship between the child's health factor and their nutrition status. Based on the p value, it is known that the factor of exclusive breast milk provision on toddlers before six months old, exclusive breast milk and complementary feeding provision on toddlers aged 6 months - 2 years, and history of hospitalization with p value < 0.05. This shows that there is a significant relationship between that variable and the child's nutrition status.

Based on the OR value, it was found out that a child not given exclusive breast milk only before 6 months old are at risk of being malnourished 2.321 times bigger than those who do. This also applies to child who do not get exclusive breast milk and

complementary feeding, they are at risk of being malnourished 2.037 times bigger than those who do at the age of 6 months until 2 years old. On the other hand, the child with history of hospitalization have 2.055 risk bigger of having malnourished than those who do not.

Discussion

Overall, the toddler's nutrition status based on Weight/Age in 6 districts in most toddlers have adequate nutrition (87.9%), but it can be seen that malnourished and nutrition-lacking toddlers reach 10.6%. The nutrition status in 6 districts in nearly all children are categorized under "adequate," specifically in Bandung City 89.1%, Bandung District 82.1, West Bandung District 94.3, Subang District 79.9, Sumedang District 88.7, and Garut District 94. Therefore, the problem of malnourished toddlers is still apparent. Out of these 6 locations, 3 districts have a more than 10% of malnourished and nutrition-lacking toddlers including Bandung City 10.1%, Bandung District 17.1%, and Subang District 16.1%. Meanwhile, the remaining 3 districts have the percentage below 10%, including Sumedang District 9.6% and Garut District 4.3%, West Bandung District 5.7%. Bandung District and Subang District were the two areas with the biggest portion of malnourished toddlers; that is, 17.1% and 15.3% respectively. The biggest number of malnourished toddlers is in Sumedang District as much as 3.6%, followed by Bandung City 2.6%. Overall, the prevalence of malnourished and nutrition-lacking toddlers reaches as high as 10.6%. This number is generally lower than the national prevalence, which is 17.7 % (Riskesdas, 2018), however this still exceed WHO parameter line in terms of the number of malnourished toddlers, which is 10%.

Nutrition problems, especially malnourishment and stunting in toddlers, may the child's growth, with negative impacts lasting for future life, such as intellectual downturn, vulnerability of degenerative and non-contagious illnesses, productivity decrease, which then leads to poverty and the risk of having babies with low weight (UNICEF, 2013; UNICEF, 2012; WHO, 2010; Adair & Guilkey, 2007). Other impacts of malnutrition during heydays are always associated with lack of specific vitamin and minerals and other micronutrients. Past research regarding the impact of lack of micronutrients, from the increase of risk on contagious illness to death. The consequences for children is grave. Lack of pure protein in advanced stage may cause kwashiorkor during school age and adolescents.

The relationship between the mother's factor and the child's nutrition status can be seen from p value on the table. If p value shows > 0.05, it means there is no relationship whatsoever. Otherwise, it shows a significant relationship. On the table, it was found out that the mother's factor relevant to the child's nutrition status is the mother's age, family income, and delivery complications. The results of this study are in line with Anugraheni and Kartasurya's research (2012) and Assefa, Belachew, and Negash's research (2013).

Based on the OR value, a mother aged above 35 years old has the risk of malnourished baby 1.583 times bigger than those aged below. This is parallel with research by Khotimah and Kuswandi (2014) claiming that age is an important indicator in determining one's productivity; younger people tend to have higher productivity level, while older ones tend to have lower. On the other hand, Harlock (2000) in Khotimah and Kuswandi (2014) claim that the older someone gets, the higher his level of knowledge is. According to Khotimah and Kuswandi (2014) and Astari, Nasoetion, and Dwiriani (2005) age is one of the factors that can describe how mature someone is, especially in terms of eating pattern, which will impact to the nutrition status. Therefore, younger mothers tend to create more varying eating pattern for their children, resulting in better nutrition status for both.

On the family income factor, it was known that families with income less than 1,500,000 rupiahs have the risk of malnourished toddlers 1803 times bigger than those who earn more. Limitation in income also determines the quality of food.

it is undeniable that what a family can earn will show in the food preserved in the dining table. Income is the main indicator relevant to food quality. The more a family can earn, the more is the quality of the food they consume. This argument sounds logical, knowing that a person can only eat what he can afford. Low income also leads to low purchasing power; this brings about many complications for the health of the family and the baby's nutrition status (Khotimah & Kuswandi, 2014). The result of this research is also suitable with a literature claiming that poverty is the main cause of malnutrition, being the first of the list (Suhardjo, 2002). If seen from the characteristics of family income, the root of malnutrition problem lies in economic crises. Most toddlers having difficulty growing physically are born in low-economy family (Aridiyah, Rohmawati, & Ririanty, 2015).

On the other hand, mothers who have delivery complications, have the risk of malnourished toddlers 2091 bigger than those who do not. These complications include anemia, hypertension, and hyperemesis. All will hamper the fetus's growth and development inside womb, so that the baby will be born with lower body weight (BBLR) which also impacts on his nutrition status (Karima & Achadi, 2012).

Table 6 shows the relationship between the child's health and his nutrition status. Based on the p value, the factor of exclusive breast milk provision on toddlers before the age of 6 months old, exclusive breast milk and complementary feeding provision for toddlers at the age of 6 months - 2 years old, and history of hospitalization have p value < 0.05. This shows that there is a significant relationship between that variable and the child's nutrition status. The results of this study are in line with Tan,s research (2011).

Based on the OR value, children who are not given exclusive breast milk only before 6 months old, carry the risk of malnutrition 2.321 times bigger than those who do. This is parallel with research from Nilakesuma, Jurnalis, and Rusjdi (2015) showing that toddlers getting exclusive exclusive breast milk have 80% normal nutrition status. This also applies to those who only get exclusive breast milk and complementary feeding carry the risk of malnutrition 2.037 times higher than those who get both at the age of 6 months to 2 years old.

The less frequency of exclusive breast milk provision becomes one of the triggers of malnutrition on toddlers, which may be caused by past experiences. A good exclusive breast milk provision by the mother will help balance the child's nutrition. This is because at the age of 0-6 months, the mother will create an immunity system for the toddlers, preventing them from contagious illnesses. Afterwards. at the age of 6 months, the toddler is given complementary feeding in sufficient amount and frequency, so that their nutrition level is fulfilled. The lower the frequency of exclusive breast milk provision, the higher the risk of malnutrition to toddlers, seen from both weight/age and length/age indices.

A good provision of exclusive breast milk by mother will balance the child's nutrition so that his development goes normally. Exclusive breast milk is highly required during the baby's development period so that the nutrition is fulfilled. Therefore, it is mandatory that a mother provide exclusive breast milk to babies until 6 months and keep providing until the baby reaches 2 years old. (AL-Rahmad, Miko, & Hadi, 2013). This research supports the Health Department claiming that issues during the baby's development is caused by lack of nutrition since birth, providing complementary feeding too early or too late, complementary feeding does not suffice the baby's needs or the providing pattern is less proper, as well as inadequate baby treatment. In this research, it can be concluded that there is a significant relationship between exclusive breast milk provision and the toddler's nutrition status ($p = 0.000$). This argument is strengthened by research from Giri, Suryani, and Murdani (2013) that mothers giving exclusive breast milk tend to have toddlers with better nutrition status than mothers who do not.

On the other hand, the child with history of hospitalization carries the risk 2.055 times bigger of malnourishment than children who do not. The status of lack of nutrition faced by toddlers is caused by the factor of history of contagious illness. This must be faced by the mother alone. This means that the history of contagious illness in toddlers is relevant to the fact that he has been infected

on the respiratory system called ISPA; other illnesses include tuberculosis. All illnesses were faced by the toddlers themselves due to the amount of bacteria from food and non-hygienic environment. Such medical records allow the children to undergo hospitalization. Therefore, that very record is what hampers the nutrition status to be better (Handayani, 2017).

Conclusion

The research was done in 6 districts including Bandung City, Bandung District, West Bandung District, Subang District, Sumedang District, and Garut District. In general, the prevalence of toddlers with malnutrition reaches 10.6%. This number is collectively lower than the national prevalence (17.7%) (Riskesdas, 2018), but it exceeds the target from WHO (10.0%). Therefore, this research concludes that there is a relationship between the mother's age (p = 0.048; OR = 1.583), family income (p = 0.010; OR = 1.803), delivery complications (p = 0.008; OR = 2.091), provision of exclusive breast milk at the age of 0-6 years old (p = 0.000; OR = 2.321), provision of exclusive breast milk and complementary feeding at the age of 6 month-2 years old (p = 0.002; OR = 2.037), and the child's history of hospitalization (p = 0.008; OR = 2.055), while other factors are irrelevant. Mothers with the age above 35, family with income less than 1,500,000 rupiahs, mothers with delivery complications, children not given exclusive breast milk before 6 months old, children not given exclusive breast milk and complementary feeding, and children with history of hospitalization-all these factors lead to them having bigger risks of malnutrition. Therefore, the research suggests that healthcare staff collaborate from all sectors to provide health education on the provision of exclusive breast milk and complementary feeding as well as on the prevention of illness on children.

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