

## Factors Affecting Nutrient Status of Children Under Five Years at Puncak Jaya District Sub Province Papuan

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### ABSTRACT

**Introduction:** The child including child in age five year is risk a group nutrient state. The mother is very important to nutrient state of child and influencing of by characteristic, knowledge, attitude, income; eat culture and role of eating.

**Target of research:** To knowing the factors affecting with nutrient state of child age under five year at Puncak Jaya District Sub Province Papuan.

**Method Research:** Analytic of observational with sectional cross study design. Research executed on July 2018 in Puncak Jaya District with population is child under five years and respondent counted 100 mother and child with purposive sampling. Data approach used questionnaire and analyzed used chi square test and logistics binary regression.

**Result of research:** There is relation with nutrient state to child under five years at Puncak Jaya District is working, (*p-value* 0,000; RP = 3,107; CI95% (2,041– 4,731), studied (*p-value* 0,046; RP = 0,542; CI95% (0,306– 0,959), knowlegde (*p-value* 0,000; RP = 4,702; CI95% (3,005 – 7,359), attitude (*p-value* 0,000; RP = 4,000; CI95% (2,596 – 6,162), eat culture (*p-value* 0,000; RP = 4,964; CI95% (3,121 – 7,893) and role of eat (*p-value* 0,000; RP = 3,254; CI95% (2,132 – 4,966). Meanwhile there is not relationship nutrient state to child under five years at Puncak Jaya District is age (*p-value* 0,463; RP = 0,735; CI95% (0,382– 1,412), financial of eat (*p-value* 0,183; RP = 1,518; CI95% (0,909– 2,534). The knowledge and eat culture is dominant variable with nutrient state to child under five years, meanwhile attitude is interaction variable.

**Keywords:** Nutrient State, Child Under Five Years, Puncak Jaya District

### 1. INTRODUCTION

Toddlers are included in the community group of vulnerable nutrition groups and if not addressed immediately are very vulnerable to various types of infectious diseases which can cause an increase in under-five mortality (Badriah, 2013). The causes of malnutrition, namely nutritional intake due to the low knowledge of maternal nutrition and understanding of foods that are safe to eat, infectious diseases, the environment, access to health services and parenting (Marmi, 2012). The emergence of nutritional problems in children under five is influenced by many interrelated factors. Directly influenced by several things, namely children do not get enough nutritious balanced food at the age of toddlers, children do not get adequate nutritional care and children suffer from infectious diseases. Poverty is also one of the causes of the emergence of cases of malnutrition related to the availability and consumption of family food (Indonesian Ministry of Health, 2015). Factors causing malnutrition, first food and possible infectious diseases in children suffering, both food security in the family, patterns of childcare, health services and environmental health. The three factors are the level of education, knowledge and skills, there is a possibility that the better the level of family food security, the pattern of childcare, and families make use of, existing health services. The inaccessibility of health

services (because they are far away, unable to pay) can also have an impact on children's nutritional status (Parii, 2014).

Data on nutritional status of infants in Papua Province, from 2015 to 2016 showed a decrease in poor nutritional status, where in 2015, malnutrition was recorded at 5.7% and malnutrition 12.4%, whereas in 2016 malnutrition was recorded 3, 7% and malnutrition 11%. Decreasing poor nutritional status and under-five in children has not shown a significant decline (Provincial Health Office of Papua, 2017). Puncak Jaya Regency is one of the districts in the Papua Province with the geographical conditions of the mountainous regions and the livelihoods of the majority of the population as farmers who depend on natural resources (forests), both as a source of income and to meet family needs and some still depend on nature in meeting life's needs. Based on the preliminary study, the 2017 nutritional status of toddlers' status in Puncak Jaya Regency of 9,117 toddlers were weighed, toddlers who gained weight as much as 7,378 (80.92%), while toddlers under the red line (BGM) were 1,709 (19.08%). When compared to 2016 the number of children under the red line (BGM) as many as 9,004 under-fives was weighed, under fives under the red line (BGM) were 1,653 toddlers (18.35%). This shows an increase in malnutrition status in children under five in Puncak Jaya Regency (Puncak Jaya District Health Office, 2017).

In general, the provision of nutritional intake for children under five in Puncak Jaya Regency is done with a variety of foods. Feeding follows food available as a menu in adults. There is no special menu provided for babies or balit. As many as 6 mothers who did not have the right nutrition knowledge about providing good nutritional intake from 10 mothers who were made respondents. The purpose of the study was to find out "Factors Associated With Nutritional Status in Toddlers in Puncak Jaya District".

## 2. RESEARCH METHODS

Observational analysis with cross sectional study design. The study was conducted on July 2018 in the Puncak District with a population of children under five and the number of respondents as many as 100 mothers and toddlers by purposive sampling. Data were obtained using a questionnaire and analyzed using the chi square test and logistic binary regression.

## 3. RESEARCH RESULTS

### Bivariate Analysis

a. Table 1. Relationship between Age of Mother and Nutritional Status of Children under five

No	Age	Nutritional Status of Children under five				n	%
		Less		Good			
		n	%	n	%		
1	≤ 21 year	8	28,6	20	71,4	28	100
2	> 21 year	28	38,9	44	61,1	72	100
Total		36	36	64	64	100	100
<i>p-value = 0,463; RP = 0,735; CI95% (0,382– 1,412)</i>							

Table 1 shows that out of 28 mothers aged less than 21 years there were 8 people (28.6%) with poor nutritional status and 9 people (75%) with good nutritional status. Whereas from 72 mothers over the age of 21 years there were 28 people (38.9%) with less nutrition status and 44 people (61.1%) with good nutritional status. The results of the chi square statistical test on the significance value of 95% ( $\alpha = 0.05$ ) obtained *p-value* 0.463 or  $p > \alpha$  (0.05). This means that there is no relationship between maternal age and nutritional status of children under five in the Puncak District of Puncak Jaya Regency. The results of the value of  $RP = 0.735$ ;  $CI95\%$  (0.382– 1.412) less than 1, so age is a protective factor with nutritional status of children under five.

### b. Relationship between mother's education and nutritional status of children under five

Table 2. Relationship between maternal education and nutritional status of children under five in the Puncak District of Puncak Jaya Regency in 2018

No	Education	Nutritional Status of Children under five				n	%
		Less		Good			
		n	%	n	%		
1	Low	12	25	36	75	48	100
2	High	24	46,2	28	53	52	100
Total		36	36	64	64	100	100
<i>p-value = 0,046; RP = 0,542; CI95% (0,306– 0,959)</i>							

Table 2 shows that of the 48 low-educated mothers there were 12 people (25%) with poor nutritional status and 36 people (75%) with good nutritional status. Whereas from 52 highly educated mothers there were 24 people (46.2%) with poor nutritional status and 28 people (53%) with good nutritional status. The results of the chi square statistical test on the significance value of 95% ( $\alpha = 0.05$ ) obtained p-value 0.046 or  $p > \alpha$  (0.05). This means that there is a relationship between the education of mothers and the nutritional status of children under five in the Puncak District of Puncak Jaya Regency. The results of the statistical test obtained a value of  $R_p = 0.542$ ;  $CI_{95\%}$  (0.306– 0.959) with a value of  $<1$ , so education is a protective factor with the nutritional status of children under five.

### c. Relationship between the work of mothers and Nutritional Status of children under five

Table 3. Relationship between the work of mothers and nutritional status of children under five in the Puncak District of Puncak Jaya Regency in 2018

No	Occupation	Nutritional Status of Children under five				n	%
		Less		Good			
		n	%	n	%		
1	Work	14	62,4	3	17,6	17	100
2	Not work	22	26,5	61	73,5	83	100
Total		36	36	64	64	100	100

*p-value* = 0,000;  $R_p = 3,107$ ;  $CI_{95\%}$  (2,041– 4,731)

Table 3 shows that of the 17 working mothers there were 14 people (62.4%) with poor nutritional status and 3 people (17.6%) with good nutritional status. While from 83 mothers who did not work there were 22 people (26.5%) with poor nutritional status and 61 people (73.5%) with good nutritional status. The results of the chi square statistical test on the significance value of 95% ( $\alpha = 0.05$ ) obtained p-value 0,000 or  $p < \alpha$  (0.05). This means that there is a significant relationship between maternal work and the nutritional status of children under five in the Puncak District of Puncak Jaya Regency. The results of the value of  $R_p = 3.107$ ;  $CI_{95\%}$  (2,041– 4,731) interpreted that mothers who work at risk

with malnutrition status in children under five are 3,107 times higher than mothers who do not work.

### d. Relationship between food expenditure and nutritional status of children under five

Table 4. Relationship between maternal food expenditure and nutritional status of children under five in the Puncak District of Puncak Jaya Regency in 2018

No	Expense for food	Nutritional Status of Children under five				n	%
		Less		Good			
		n	%	n	%		
1	Low	15	46,9	17	53,1	32	100
2	High	21	30,9	47	69,1	68	100
Total		36	36	64	64	100	100

*p-value* = 0,183;  $R_p = 1,518$ ;  $CI_{95\%}$  (0,909– 2,534)

Table 4 shows that food expenditure from the family expenditure of mothers of 32 people with expenditure on low food contained 15 people (46.9%) with poor nutritional status and 17 people (53.1%) with good nutritional status. Whereas from 68 mothers with high food expenditure there were 21 people (30.9%) with poor nutritional status and 47 people (69.1%) with good nutritional status. The results of the chi square statistical test on the significance value of 95% ( $\alpha = 0.05$ ) obtained p-value 0.183 or  $p > \alpha$  (0.05). This means that there is no significant relationship between expenditure on maternal food and the nutritional status of children under five in the Puncak District of Puncak Jaya Regency. The results of the value of  $R_p = 1.518$ ;  $CI_{95\%}$  (0,909– 2,534) with a lower value of less than 1, so it is not meaningful.

### e. Relationship between knowledge of mothers and toddlers' nutritional status

Table 5. Relationship between knowledge of mothers and nutritional status of children under five in the Puncak District of Puncak Jaya Regency in 2018

No	Knowledge	Nutritional Status of Children under five				n	%
		Less		Good			
		n	%	n	%		
1	Less	20	95,2	1	4,8	21	100
2	Good	16	20,3	63	79,7	79	100
Total		36	36	64	64	100	100

*p-value* = 0,000;  $R_p = 4,702$ ;  $CI_{95\%}$  (3,005 – 7,359)

Table 6 shows that out of 21 mothers with less knowledge there were 20 people (95.2%) with poor nutritional status and 1 person (4.8%) with good nutritional status. While from 79 mothers with good knowledge there were 16 people (20.3%) with poor nutritional status and 63 people (79.7%) with good nutritional status. The results of the chi square statistical test on the significance value of 95% ( $\alpha = 0.05$ ) obtained p-value 0,000 or  $p < \alpha$  (0.05). This means that there is a significant relationship between maternal knowledge and nutritional status of children under five in the Puncak District of Puncak Jaya Regency. The result of the value of RP = 4.702; CI95% (3,005 - 7,359) interpreted that respondents with less risk knowledge with malnutrition status in children under five were 4,702 times higher than those with good knowledge.

#### f. Relationship between mother's attitude and toddler's nutritional status

Table 6. Relationship between mother's attitude and nutritional status of children under five in the Puncak District of Puncak Jaya Regency in 2018

No	Attitude	Nutritional Status of Children under five				n	%
		Less		Good			
		n	%	n	%		
1	Less	18	90	22	10	20	100
2	Good	18	22,5	10	77,5	80	100
Total		36	36	64	64	100	100

*p-value = 0,000; RP = 4,000; CI95% (2,596 - 6,162)*

Table 6 shows that of the 20 mothers who behaved less there were 18 people (90%) with poor nutritional status and 22 people (10%) with good nutritional status. While from 80 mothers with good attitudes there were 18 people (22.5%) with poor nutritional status and 10 people (77.5%) with good nutritional status. The results of the chi square statistical test on the significance value of 95% ( $\alpha = 0.05$ ) obtained p-value 0,000 or  $p < \alpha$  (0.05). This means that there is a significant relationship between maternal attitudes and nutritional status of children under five in the Puncak District of Puncak Jaya Regency. Results value of Rp = 4,000; CI95% (2,596 - 6,162) which is interpreted that mothers who are

less risky with less nutritional status in children under five are less than 4 times higher than mothers who are good

#### g. Relationship between Diet and Toddler Nutrition Status

Table 7. Relationship between diet and nutritional status of children under five in the Puncak District of Puncak Jaya Regency in 2018

No	Diet	Nutritional Status of Children under five				n	%
		Less		Good			
		n	%	n	%		
1	Less	15	83,3	3	16,7	18	100
2	Good	21	25,6	61	74,4	82	100
Total		36	36	64	64	100	100

*p-value = 0,000; RP = 3,254; CI95% (2,132 - 4,966)*

Table 7 shows that out of 18 mothers with a diet less than 15 people (83.3%) with poor nutritional status and 3 people (16.7%) with good nutritional status. While from 82 mothers with good children's diet there were 21 people (25.6%) with poor nutritional status and 61 people (74.4%) with good nutritional status. The results of the chi square statistical test on the significance value of 95% ( $\alpha = 0.05$ ) obtained p-value 0,000 or  $p < \alpha$  (0.05). This means that there is a significant relationship between eating patterns and nutritional status of children under five in the Puncak District of Puncak Jaya Regency. The results of the value of RP = 3.254; CI95% (2,132 - 4,966) which is interpreted that the diet of children under five is less risky with less nutritional status of 3,254 times higher than the diet of a good child.

#### h. Relationship between mother's eating culture and Nutritional Status of children under five

Table 8. Relationship between mother's eating culture and nutritional status of children under five in the Puncak District of Puncak Jaya Regency in 2018

No	Eating culture	Nutritional Status of Children under five				n	%
		Less		Good			
		n	%	n	%		
1	Less	21	95,5	1	4,5	22	100
2	Good	15	19,2	63	80,8	78	100
Total		36	36	64	64	100	100

*p-value = 0,000; RP = 4,964; CI95% (3,121 - 7,893)*

Table 8 shows that out of 22 mothers who have a culture of eating there are less 21

people (95.5%) with less nutritional status and 1 person (4.5%) with good nutritional status. While from 78 mothers with good eating culture there were 15 people (19.2%) with poor nutritional status and 63 people (80.8%) with good nutritional status. The results of the chi square statistical test on the significance value of 95% ( $\alpha = 0.05$ ) obtained p-value 0,000 or  $p < \alpha$  (0.05). This means that there is a significant correlation between the mother's eating culture and the nutritional status of children under five in the Puncak District of Puncak Jaya Regency. The results of the value of  $RP = 4.964$ ;  $CI_{95\%}$  (3,121 - 7,893) interpreted that respondents with a less risky eating culture with nutritional status of children under five were less than 4,964 times higher than mothers who had a good family eating culture.

## DISCUSSION

### 1. Relationship between Age of Mother and Nutritional Status of Children under five

The results showed that there was no relationship between maternal age and nutritional status of children under five in Puncak District, Puncak Jaya Regency, where mothers less than 21 years old were 28.6% with poor nutritional status, while mothers over the age of 21 had children under five as much as 38.9%. This shows that the proportion of those in the age group is the same - having a risk in children under five with poor nutritional status. This research is in line with Labada's (2016) research in Bahu Manado Health Center, that the age of the mother does not affect the nutritional status of the toddler. According to Prayoto (2014), the older a person is, the experience will increase so that he will increase his knowledge of an object. In this study the percentage of gizibalita status was more or less in mothers who were younger than 21 years old. However, this risk factor cannot be explained, this is evident from the results of the prevalence ratio test that is stated as age is not at risk for the nutritional status of children. This is influenced by

other research variables that more strongly influence mothers with underfive nutritional status such as knowledge and attitudes of mothers.

This is according to Notoamodjo (2011), that increasing age affects one's behavior in gaining knowledge that affects one's attitude. In adulthood, individuals will play an active role in society and social life and prepare more for the success of efforts to adjust to old age, besides that adults will use more time to read (Fitriani, 2013).

### 2. Relationship between mother's education and nutritional status of children under five

The results showed that there was a relationship between the education of mothers with nutritional status of children under five in Puncak District, Puncak Jaya District, i.e. 25% of those with low education had under-five children with poor nutritional status, while 46.2% of mothers with high education were underweight. This research is in line with the research conducted by Kristianti (2017) in Pontianak that maternal education is related to children's nutritional status. Education is the process of changing attitudes and behavior of a person or group of people in an effort to mature people through teaching and training (Prayoto, 2014). Maternal education is the main capital in the preparation of family meals, child care and care (Suhardjo, 2003 in Kristianti, 2017). In this study a portion of maternal education was 48% with low education and 52% with higher education and the most was high school. In this study, there was no educational relationship to the nutritional status of children under five due to the level of education affecting people's comprehension or thinking power towards access to information obtained. Thus mother's education in this case is related to the amount of information.

According to Sulistyaningsih (2011) that not always mothers with low education have less knowledge compared to mothers who are highly educated. This is due to exposure to information, but with higher

education makes it easier for mothers to have the power of thought, so that the mudha receives the information conveyed. There are a lot of low-educated mothers, so it is expected that Puskesmas efforts in improving health education about nutrition have an impact on increasing knowledge, because according to Suhardjo (2009) the low level of education is closely related to the inactivity of mothers who have toddlers to provide food nutrition. The low level of maternal education affects the receipt of information so that knowledge about nutrition is hampered or limited.

### **3. Relationship between the work of mothers and Nutritional Status of children under five**

The results showed that there was a relationship between the work of mothers and the nutritional status of children under five in the Puncak District of Puncak Jaya Regency. Mothers who work have children under five with malnutrition as much as 62.4% and mothers who do not work as much as 26.5% with poor nutritional status. This shows that many mothers who work for children under five have malnutrition of 3,107 times. This research is in line with the research of Khotimah (2013), that work is related to the nutritional status of children under five Work is something that is done to earn a living, make a living (Prayoto, 2014). The work environment can make a person gain experience and knowledge, both directly and indirectly (Mubarak, 2011). Today women have the opportunity to work openly. The basic reason for a woman to have a marriage is not the same between one another. The reason that is commonly found is due to financial needs to enrich personal experience and knowledge, achievement (Prayoto, 2014).

In this study the proportion of nutritional status of children under five with malnutrition status in working mothers, because of the lack of mothers provides supervision to children on the fulfilment of nutritional intake. Although mothers who work will certainly influence family

expenses in fulfilling family food security, but the busyness of working mothers, so the intake or consumption of children's food is less attention that affects the diet of children. As children in mothers who work in care are given to family or caregivers who are hired, but the mother's own attention is different compared to family and carers. Working mothers need to pay attention to children under five in providing nutritional intake to their children by regulating the mother's work schedule and feeding time, so that the status of the child's gzi is well maintained.

### **4. Relation of expenditure for mother's food with Toddler Child Nutrition Status**

The results showed that there was no relationship between expenditure on food for mothers and nutritional status of children under five in the Puncak District of Puncak Jaya Regency. Mothers who have low expenditure for food as much as 46.9% of people with poor nutritional status and mothers with expenditures for foods with high expenditure as much as 30.9% with poor nutritional status. The results of the value of  $RP = 1.518$ ;  $CI95\% (0,909- 2,534)$  with a lower value of less than 1, so it is not meaningful. This research is in line with the research conducted by Kristianti (2017), that expenditure on food affects maternal expenditure in meeting children's nutritional intake.

With the mother working, you can add expenditure on food affects the family's purchasing power in meeting the nutritional needs of children and other family members. Families with more income are more likely to be good and even excessive in meeting food needs, whereas families with limited income are more likely to be lacking in fulfilling food needs, especially to meet nutritional needs (Kristianti, 2017).

Expenditures for high food and good management can affect family spending in strengthening family food security. High expenditure on children's eating needs is related to nutritional intake according to

children's needs. But this is related to the variable knowledge of mothers in the selection of good food, so that high expenditure has not been able to meet the nutritional needs of families, especially children. This is evident from the results of the prevalence ratio test that high family opinion is meaningless.

#### **5. Relationship between mother's knowledge and toddler's nutritional status**

The results showed that there was a relationship between knowledge of mothers and nutritional status of children under five in the Puncak District of Puncak Jaya Regency. Knowledgeable mothers were as much as 95.2% with poor nutritional status, while well-informed mothers as many as 20.3% had children under five with poor nutritional status. The less knowledge of mothers increases the incidence of malnutrition status in children under five at 4,702 times. This research is in line with Labada's research (2016), that knowledge is a factor that is related to the nutritional status of children. Knowledge is a guideline in shaping one's actions (overt behavior). Behavior based on knowledge will last longer than behavior that is not based on knowledge (Maryam, 2014). Most human knowledge is obtained through the eyes and ears. Knowledge or cognitive is dominant which is very important for one's actions (Prayoto, 2014)

Knowledge that is owned by a good mother knows the benefits of posyandu in detecting the nutritional status of children, feeding children who are more recommended to adults, selecting and processing food ingredients that are good at feeding their children and mother's knowledge about the frequency of eating in children. Lack of knowledge will have an impact on the actions of mothers in providing good nutrition for mothers, so that nutritional intake is not in accordance with the needs of the body where malnutrition is related to knowledge as much as 95.2%.

This is certainly a concern for officers about increasing maternal knowledge about nutritional intake for children under five as well as more adequate health education efforts for mothers by collaborating with nutrition cadres in Posyandu with a language that is easily understood, because most mothers have low education, so knowledge the good gives lasting action and connects with the nutritional status of children under five.

#### **6. Relationship between mother's attitude and Toddler's Childhood Nutrition Status**

The results showed that there was a relationship between maternal attitudes and nutritional status of children under five in the Puncak District of Puncak Jaya Regency. Mothers who have less attitudes as much as 90% with less nutritional status, while mothers who have good attitudes as much as 22.5% with poor nutritional status. Mothers who have less attitudes have a chance to have children under five times less 4 times higher than mothers who are good. This research is in line with the research conducted by Labada (2016), knowledge related to children's nutritional status. A good attitude about child nutrition will have an impact on the pattern of feeding given to children under five so that it affects the nutritional status of children under five (Astuti, 2017). Family attitudes and environmental conditions play an important role in feeding children at this age, for example by creating a pleasant eating atmosphere (Proverawati, 2011).

#### **7. Relationship between Diet and Toddler Nutrition Status**

The results showed that there was a relationship between diet and nutritional status of children under five in the Puncak District of Puncak Jaya Regency. Mothers who have children with less diet are 83.3% with less nutritional status while mothers who have children with a good diet are 25.6% with poor nutritional status. The results of the value of  $RP = 3.254$ ;  $CI95\%$

(2,132 - 4,966) which is interpreted that the diet of children under five is less risky with less nutritional status of 3,254 times higher than the diet of a good child.

Diet is a variety of information that gives an idea of the type and amount of food consumed by each person by one person and is a characteristic of a particular group of people (Sulistyaningsih, 2011). Toddler children are passive and active consumers. The food depends on what the mother provides. Milk teeth have grown, but cannot be used to chew food that is too hard. But children should be directed to follow the diet of adults. At 4-5 years old children are active consumers, that is, they have been able to choose the foods they like. They have been given nutrition education both at home and at school. Good habits must be instilled. A good diet, if the frequency of eating 3 times a day (Almatsier, 2011).

The prevalence of the problem of eating difficulties according to the child development clinic of Affiliated program for children development at the University of George Town said that 6 types of eating difficulties in children are only eating liquid or pulverized food: 27.3%, difficulty sucking, chewing or swallowing: 24.1% strange and odd eating habits: 23.4%, disliking variations in food: 11.1%, self-eating delay: 8.0%, mealtime tantrum: 6.1% (Judarwanto, 2011).

In this study a good family gives their children to eat regularly three times a day with the fulfillment of balanced nutrition, but depends on parents in caring for their children because not all children have the same appetite. Healthy eating patterns can not be separated from the input of nutrition which is the process of organisms using food consumed through the process of digestion, absorption, transportation, storage, metabolism and expenditure of substances that are not used to maintain life, growth and normal functioning of organs, and produce energy. A person's diet is influenced by cultural factors, religion and beliefs, socio-economic

status, hunger, appetite, satiety, and health (Baliwati, 2009).

## **8. Relationship between eating culture and Nutritional Status of children under five**

The results showed that there was a relationship between eating culture and nutritional status of children under five in the Puncak District of Puncak Jaya Regency. Mothers who have a culture of eating less as much as 95.5% with less nutritional status, while mothers with a good eating culture as much as 19.2% with under nutrition This research is in line with the research conducted by Watopa (2015) in Waropen District that there is a cultural relationship between family eating and children's nutritional status.

The culture of eating is lacking, namely the mother does not provide children with certain dietary foods that are believed, Mother follows the child's willingness to eat which is not as diverse as eating rice with soy sauce only, Mother gives children solid food in children who are easily satisfied. In addition, mothers do not provide certain foods, even though mothers know that food is beneficial for children. While the culture of eating a good mother, mothers choose foods that are cheap and healthy and diverse. A culture of eating that is less at risk for underfive nutritional status. This is evident from the prevalence ratio test of 4.964 times higher compared to mothers who have a good family eating culture.

There are interesting things in Papua, in general, people still place sago and sweet potatoes as the main choice of staple food for the Papuan people. Anthropologists, view eating habits as a whole complex of kitchen-related activities, hobbies, and dislike of a type of food, popular proverbs, beliefs, prohibitions and superstitions related to production, preparation of food processing and consumption of food as main categories of culture (Mapandin, 2006). According to Kristianto (2013), the culture in feeding children under five occurs



because mothers and families have beliefs that are based on cultural aspects, so the mother decides to provide food in accordance with the cultural conditions.

The Lani and Dani tribes occupy Puncak Jaya regency, which is a new regency which is the result of the expansion of Jayawijaya Regency. Puncak Jaya Regency occupies the western part of the Baliem Valley. The Puncak Jaya Regency area consists of hilly areas, steep ravines, high mountains up to 2,500 meters above sea level (asl). Such topographic conditions are like natural isolation which is the cause of this region's underdevelopment. The shape of the squiggly land of Mimika has resulted in the making of land roads difficult. The livelihood of the Lani people is farming, the crops they plant are cassava (Somantri, 2008).

## 9. Dominant Factors

The results showed that the dominant factors related to the nutritional status of children under five were the knowledge and culture of eating is the dominant variable on the nutritional status of children under five while the attitude is an interaction variable. Good knowledge can choose food ingredients and processing good food. Culture of family eating which is considered negative is not practiced by mothers because food is not diverse. Knowledge that does not have an impact on fulfilling nutritional intake is supported by the negative culture that is followed by the family, so that the provision of nutritional intake is not diverse, but this depends on the attitude of the mother. So that interaction attitudes affect the knowledge and culture of family meals.

## CONCLUSION

Based on the results of the discussion it can be concluded as follows:

1. There is no relationship between maternal age and nutritional status of children under five in Puncak Regency District, Puncak Jaya (p-value 0.463; RP = 0.735; CI95% (0.382– 1.412).

2. There is a relationship between the education of mothers and the nutritional status of children under five in Puncak Regency District Puncak Jaya (p-value 0.046; RP = 0.542; CI95% (0.306– 0.959).
3. There is a relationship between the work of mothers and nutritional status of children under five in Puncak Regency District Puncak Jaya (p-value 0,000; RP = 3,107; CI95% (2,041– 4,731).
4. There is no relationship between expenditure on food for mothers and nutritional status of children under five in Puncak Regency District Puncak Jaya (p-value 0.183; RP = 1.518; CI95% (0.909– 2.534).
5. There is a relationship between the knowledge of mothers and the nutritional status of children under five in Puncak Regency District Puncak Jaya (p-value 0,000; RP = 4,702; CI95% (3,005 - 7,359)
6. There is a relationship between maternal attitudes and nutritional status of children under five in Puncak Regency District Puncak Jaya (p-value 0,000; Rp. 4,000; CI95% (2,596 - 6,162).
7. There is no correlation between diet and nutritional status of children under five in Puncak Regency District Puncak Jaya (p-value 0,000; RP = 3,254; CI95% (2,132 - 4,966).
8. There is a relationship between eating culture and nutritional status of children under five in Puncak Regency District Puncak Jaya (p-value 0,000; RP = 4,964; CI95% (3,121 - 7,893).
9. Knowledge and eating culture are the dominant variables that are related to the nutritional status of children under five while attitudes are interaction variables.

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