

DOMINANT FACTOR RELATED WITH TODDLER NUTRITIONAL STATUS IN PUBLIC HEALTH CENTRE HEDAM PAPUA YEAR 2016

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ABSTRACT

One of the world health problems faced is still the problem of malnutrition. Children who are malnourished or low body resistance is so susceptible to get infectious diseases. Nutritional status is a condition that can describe a person's nutrition, are classified as good nutrition, malnutrition, poor nutrition, or average nutrition. The aim of this research is to know The Dominant Factor Related with Toddler Nutritional Status in Public Health Centre (PHC) Hedam Papua Year 2016. This type of research is correlative deskriptif research that aims to reveal the correlative relationships between variables. In this correlation study design involving at least two variables, with cross sectional such as the time of the study, both measured variables simultaneously. The result research of statistical test Chi square on a significance value of 95% ($q < 0.05$) was obtained p -value of 1.000 or $p < (0.05)$ thus there is relation between maternal education level with the nutritional status of children in urban village PHC Hedam Kedam, There is relation between the mothers income with nutritional status of children in urban village Puskesmas Hedam, But there are no relation on others factors that being test.

Key words: Public Health Centre (PHC), Toddler, Factor

A. BACKGROUND

The toddler is a child under the age of 5 years. Toddlers ages 1 year can be divided into two children aged over one year to three years, known as toddlers and children aged over three years to five years, known as preschool age (Proverawati, 2010). One of the health problems faced is the problem of malnutrition. Children who are malnourished body resistance is low so susceptible to infectious diseases (MOH, 2012).

Feeding practices that do parents play an important role in meeting the nutritional needs of children (Murashima *et al.*, 2012). Parents responsible for child care including nutritional needs for growth and development of children (Hockenberry and Wilson, 2011). Parents often use sweets as a gift for the child control and no control in the selection of children's food (Kolopaking *et al.*, 2011). Parents do not specify the foods that should be eaten to the wishes of

the child but tends to feed the child without any attempt to provide food dislikes before (Chaidez *et al.*, 2011). Research Jansen *et al.*, (2012) menyebutkan bahwa parents put pressure on when children eat by forcing the child to keep eating even though the child was not willing.

Feeding behavior affects the nutritional status of children. Good nutritional status or optimal nutritional status occurs when the body gets enough nutrients, so as to enable physical growth, brain development, employability and general health at the highest possible level. Status of malnutrition occurs when the body is deprived of one or more essential nutrients. Excessive nutrient status occurs when the body obtain excess nutrients, causing dangerous toxic (Almatsier, 2001).

Nutritional status is a condition that can describe a person's nutrition, are classified as good nutrition, malnutrition, poor nutrition, or average nutrition. Determination of nutritional

status commonly used is the formula weight than age. In normal conditions, in which good health condition and consumption and nutritional needs are guaranteed, then the weight following the growing age. Conversely in abnormal condition, there are two possibilities for the development of weight loss that is growing faster or slower than normal.

Age plays an important role in determining the nutritional status. Age determination is wrong of course will cause an error in interpreting the nutritional status. Weighing accurate weight is meaningless if not accompanied by appropriate age determination. Based on these characteristics, the index weight for age is used as one way of measuring nutritional status for describing the nutritional status of a person's current (*current nutritional status*) (Supariasa, Bakri, and Dawn, 2002).

Factors affecting the nutritional state that consumption of food and health level. Food consumption is influenced by food income, and the availability of foodstuffs (Supariasa, Bakri, and Dawn, 2002). Based on the results of research conducted by Isnansyah (2006), factors associated with infant nutritional status is the level of maternal education, maternal employment and family income, maternal knowledge, infectious diseases.

Feeding in children can be influenced by the knowledge and attitude of the mother and the support of family and the environment. Knowledge and mother attitude will affect food intake in the family, especially children (Ministry of Health, 2005). The incidence of malnutrition in children can be caused by attitudes or behavior of mothers to be a factor in the selection of food that is not true. Selection of groceries, the availability of food in sufficient quantity and variety of food is influenced by a mother's level of knowledge about food and nutrition.

Ignorance can lead to maternal education and knowledge are indirect factors that influence a person's behavior. Knowledge gained someone can not be separated from education. Nutrition knowledge, supported by an adequate education, will instill the habits and the use of the food was

good. Mothers who have extensive knowledge of nutrition, it can pick and feed her children better. The role of parents, especially mothers, to direct the child in the selection of street food is big enough (Mahfoedz and Suryani, 2007).

Mother's knowledge about balanced nutrition is important, since the role of the mother in the family as the manager of the food. Mothers who do not know the nutritional food, would serve food that is not balanced nutrition. The more knowledge of the nutritional increasingly taken into account the type and amount of food have to be consumed. As for who did not have sufficient knowledge of nutrition and income will choose the most attractive food senses and not make choices based on the nutritional value of food. Instead they are more and more knowledge of nutrition and income, and used a more rational consideration and knowledge of the nutritional value of these foods (Sediaoetama, 2010).

Based on the results of research conducted by Zuraida and Nuris (2013) about the relationship with the mother's knowledge and attitudes in the feeding behavior of mothers of children aged 12-24 months, 33.8% of mothers are the result of a number of high school graduates from 65 mothers. The results show knowledge of mothers on children's food in both categories as many as 56 mothers (86.1%). Knowledge of mothers on children's food on less category are the mothers (13.8%). The behavior of mothers about feeding the child more in the category of less that 48 mothers (73.8%). Based on the survey results revealed no correlation with the knowledge of mothers on feeding behavior.

Based on the results of a survey conducted early in Integrated health centre Gilingan of 15 respondents indicated that as many as 26.6% of respondents have a level of knowledge of good and as much as 73.4% of respondents have less knowledge level. While the results of a preliminary survey in July 2014 food choices among children under five in the region Surakarta puskesmas mill as much as 80% of mothers have not been good behavior towards the selection of food for babies.

From the data obtained the number of health centers Hedam malnutrition status of children under five and 20 people were taken mera line by 17 oang children in 2014 Based on the description above background, it is clear that the child's potential is strongly influenced by factors of good nutrition. Good nutrition will increase the potential of the child, for the mother's role is very important in a child's attention to diet or as a provider of food in the household,

B. FORMULATION OF THE PROBLEM

The issues examined are "factors that influence nutritional status in Puskesmas Hedam Toddlers

C. AIM

a. General purpose

Identification factors affecting the nutritional status of children in the health center Hedam

b. Special purpose

- b. Hub Ungan between maternal education level with Toddler Nutritional Status in Puskesmas Hedam
- c. H association between maternal employment rate with Toddler Nutritional Status in Puskesmas Hedam
- d. H association between income families with Toddlers Nutritional Status in PHC Hedam
- e. H association between maternal knowledge with Toddler Nutritional Status in Puskesmas Hedam
- f. H an association of family members with Toddler Nutritional Status in PHC Hedam
- g. H an association with the Nutritional Status of infectious diseases at the health center Toddler Hedam
- h. H association between the doings of the foster mother with toddler at health centers Nutritional Status Hedam

D. Benefits of research

- a. This research is expected to provide an overview for pemerinta, Jayapura City Health department and the PHC

- b. Research is expected to be a source of additional information on the nutritional status of children in health centers
- c. For further researcher can be as input

E. Research limitations

- a. Limitations in research are the doings of parenting to the nutritional status of children.

THEORETICAL REVIEW OF THEORY

1. Toddler Nutrition

Judging from the health and nutrition of children under five are the most vulnerable groups, namely nutrition groups most likely to suffer from nutritional disorders, as they are currently undergoing a process of very rapid growth, so it requires nutrients is high. Kids this age need food substances that are relatively more with higher quality used for the process of human growth, the growth of the brain that determines a person's level of intelligence is very dependent on the conditions of nutrition and health during infancy (Achmad Djaelani S, 2000: 10).

Infants and children still can not take care of himself very well, so it needs the attention of parents, can not be trying to get himself what he needed to eat. While various restrictions and taboo concerning food plenty imposed on children under five. In addition, children under five began to fall to the ground and began to get acquainted with the various conditions that can cause infection or other diseases. Though his body has not quite have immunity (resistance) to fight the disease (Achmad Djaelani S, 2000: 233).

Dietary Allowances (RDA) is the amount of each essential nutrients that must be met from food covering virtually all healthy people to prevent nutritional deficiency. Figures Nutritional adequacy is influenced by age, gender, activity, weight, height, genetics, and physiological conditions, such as pregnant and lactating mothers (Department of Nutrition and Public Health, 2009: 117).

Usefulness of AKG, among others; for planning the food supply regional or national level, to assess the data consumption of food an individual or group, for planning the provision of food for the institution, to establish standards of food aid in an emergency, to establish guidelines for the purposes of nutritional labeling packaged food, and material for counseling or education nutrition related to the nutritional needs according to age groups and activities as well as jeniskelamin. (Department of Nutrition and Public Health, 2009: 118-119).

A child who will grow flowers AKGnya balanced according to its genetic potential, which will cause more nutritional problems and

- a) Rumus penentuan tingkat energi pada balita

$$\text{AKG (energi)} = \frac{\text{BB aktual}}{\text{BB dalam tabel AKG}} \text{AKG tabel (energi)}$$

$$\text{Tingkat Kecukupan Energi} = \frac{\text{energi hasil (ricall)}}{\text{AKG energi}} 100\%$$

- b) Rumus penentuan tingkat protein pada balita

2. Toddler Nutritional Status

The toddler is a process of rapid growth that requires attention and affection from parents and the environment. Besides, toddlers need nutrients balanced so that good nutritional status, as well as the growth process is not hampered, because balitamerupakan age groups most often suffer from malnutrition (Soegeng Santoso and Anne Lies, 2004: 71).

a. Understanding Nutritional Status Toddler

Nutritional status is a state body as a result of food consumption and utilization of nutrients are divided into four categories of malnutrition, under nutrition, good nutritional status and nutritional status (Sunita Almtsier, 2001: 1).

Nutrition is a process of using food as a way to sustain life, growth and normal functioning of the organs, and can produce energy. Food eaten will go through various processes such as digestion, absorption, transport, storage, metabolism, and eventually will be removed from the body (Proverawati & Asfuh, 2009).

malnutrition. According to Sunita Almtsier (2001: 11) malnutrition generally cause a disruption in the child's growth process is not potential, the body's defenses against the stress decreases, the immune system and antibodies reduced so that people susceptible to infections such as colds, coughs and diarrhea. As well as the disruption of brain structure and function permanently. The behavior of both children and adults who are malnourished exhibit behaviors not quiet, often irritable, maudlin and apathy.

Based on the above table, the level of energy and protein sufficiency can be calculated using the following formula:

$$\text{AKG (protein)} = \frac{\text{BB aktual}}{\text{BB dalam tabel AKG}} \text{AKG tabel (protein)}$$

$$\text{Tingkat Kecukupan Protein} = \frac{\text{protein hasil (ricall)}}{\text{AKG protein}} 100\%$$

(Sources: I Dewa Nyoman Supariasa dkk, 2001:114)

Based Semi ANthropometric Loka, Ciloto, 1991 has recommended the use of a reference standard *World Health Organization-National Centre for Health Service (WHO-NCHS)* (Indonesian Nutrition, Vol. XV 2 1990). Based on the standard WHO-NCHS nutritional status is divided into four, namely:

b. nutritional more

Nutrition is nutrition state that goes beyond the normal limits in quite a long time and can be seen from the excessive weight (Sandjaja *et al.*, 2010). Overweight and obesity included into more nutrition. Impact of nutritional problems more apparent with increasing degenerative diseases, such as coronary heart disease, diabetes mellitus (DM), hypertension, and heart disease (Supariasa, Bakri, and Dawn, 2002).

c. Good Nutrition

Good nutrition will be achieved when the amount of food eaten and the body needs balanced (Sandjaja *et al.*, 2010). The physical

state of the normal include hair shiny and not easily separated, the face is not swollen, eyes gleaming and spotless, lips and tongue is smooth and there is no swelling, skin clean and there was no swelling and no spotting, muscle tone is good, normal heart rhythm, on the gastrointestinal system no palpable mass, and a stable nervous system and normal reflexes (Supariasa, Bakri, and Dawn, 2002).

d. Malnutrition

Malnutrition is the malnutrition rate was caused by low consumption of energy and protein that occurs in quite a long time (Messrs *et al.*, 2010). Malnutrition include protein energy malnutrition (PEM) light and medium level. Clinical symptoms of mild and moderate PEM level on checks only look thin (Supariasa, Bakri, and Dawn, 2002).

Under five suffering malnutrition will certainly have an impact on a variety of things, including the growth and development, organ and body system.

a. Growth and development of infants

The impact on growth is small and squat posture *performance* to the detriment of the child. The impact on their development is impaired mental development and brain. Short-term mental development is impaired as children become apathetic, impaired speech and other distractions. As for the impact of its long-term decline in IQ test scores, decreased cognitive development,

concentration problems, decrease in self-esteem and decreased academic achievement (Dahlia, 2012).

b. Organs and body systems

The body's defense system against microorganisms and mechanical defense would weaken so easily cause infection (Dahlia, 2012).

e. Malnutrition

Malnutrition is severe malnutrition due to low levels of energy and protein intake of food daily that happened in a long time (Messrs *et al.*, 2010). KEP level of malnutrition include weight that includes *marasmus*, *kwashiorkor*, and *marasmic-kwashiorkor*.

Clinical symptoms of *marasmus* include children looked very thin, like an old man's face, whiny, fussy, wrinkled skin, often accompanied by chronic diarrhea or constipation and other chronic diseases, and reduction in blood pressure and breathing. *Kwashiorkor* has symptoms include edema were generally on the whole body, especially in the legs, face rounded and swollen, the muscles shrink, whiny, fussy, anorexia, enlargement of the liver, often accompanied by infection, anemia and diarrhea, dull hair and easily removed, skin irritation, and eyes were glazed. While the symptoms of *marasmic-kwashiorkor* which is a combination of symptoms of *marasmus* and *kwashiorkor* (Supariasa, Bakri, and Dawn, 2002).

Table 2.2. Category Threshold Nutritional Status of Children Under Age According to Body Weight Index (BB / U) Kids Age 0-60 *months*.

Threshold (Z-Score)	Category Nutritional Status
<-3 SD	Malnutrition
- 3 SD up to <-2 SD	Malnutrition
- 2 SD up to 2 SD	good nutrition
> 2 SD	nutritional more

Assessment of nutritional status (PSG) can be derived from data that has been interpreted using a variety of methods. The purpose of the assessment of nutritional status which gives a general overview of the methods used in assessing the nutritional status, provide a description of the advantages and disadvantages of the existing methods, and provide a brief overview to assess the nutritional status including data collection, planning, and implementation. Methods in PSG is divided into three, namely Met ode directly include an assessment by looking at the clinical signs, laboratory tests, physical methods, and anthropometry. The indirect method can be done by looking at health statistics. Ratings by looking at ecological variables needed to determine the causes of malnutrition like to see socioeconomic factors, factors related to food, health, demographics, politics and policy, culture, geography and climate (the Department of Nutrition and Public Health, 2010).

Anthropometry is one of the PSG direct method is most often used to assess two major issues concerning nutrition is protein energy malnutrition (PEM) and obesity. Anthropometric measurements can be used to see the growth of children which include body mass, linear measurement (length), and body composition. The main anthropometric measurements are height, weight, arm circumference, and fat folds. One of the anthropometric measurements are most often used to see the growth that is weight. To assess the nutritional status, body weight normally associated with age (Department of Nutrition and Public Health, 2010).

Weight loss describes the amount of protein, fat, water and bone mineral mass. Weight becomes the primary choice to see the nutritional status for several reasons, among others, easily visible change in a short time due to the consumption of food and health conditions, provide an overview of nutritional status now, commonly used in Indonesia, and the skills of measuring not much affect the measurement results (Proverawati & Asfuah, 2009).

Age plays an important role in determining the nutritional status. Error determination will lead to wrong interpretation of nutritional status. Weighing results accurate weight is meaningless if not accompanied by appropriate age determination. There is a tendency to choose the

numbers easy as 1 year, 1.5 years, or two years is a mistake that often arise. Therefore, the determination of the age of the child needs to be calculated carefully. Age determination is 1 year = 12 months, 1 month = 30 days. So the age calculation is the full moon, meaning the rest of the age in days not counted (Supariasa, Bakri, and Dawn, 2002).

b. Nutrition

Toddlers in the growth process, so the daily diet should meet the nutritional needs. Nutrient or nutrients is the base material making up groceries. Nutrients consist of:

1. Carbohydrate

The chemical makeup of carbohydrates consist of carbon atoms (C), hydrogen (H) and oxygen (O). The type of carbohydrate in food are grouped into monosakarisa, disaccharides, and polysaccharides. The function of carbohydrates in the body, among others:

- a. As a source of energy.
- b. Give volume to the contents of the intestine and intestinal peristalsis launched so as to facilitate the disposal of faeces.
- b. Parts of the cell structure in the form of a glycoprotein hormone receptors.
- c. Energy reserves in the liver and muscles in the form of glycogen that is easily mobilized.
- d. Saver regulator protein and fat metabolism.
- e. Gives sweetness to food
- f. Giving aroma and shape kha s food (Department of Nutrition and Public ehatan Kes, 2009: 65).

2. Protein

Protein as well as carbohydrates and fats was built by the elements carbon (C), hydrogen (H) and oxygen (O), but also contains nitrogen (N). Vegetable protein can be obtained from plants, while animal protein derived from animals. Protein function:

- a. Protein has a function which is a key part of all body tissue formation, ie with synthesized from food.
- b. Growth and survival ter so if enough protein intake.
- c. Regulating body fluid balance (the Department of Nutrition and Public Health, 2009: 29).

3. Fat

Fat is an organic compound consisting of carbon atoms (C), hydrogen (H) and oxygen (O). Fat is soluble in fat solvents, such as benzene, ether,

petroleum, and so forth. Fat function, among others:

a. The energy source produces 9 kcal calories in every gram of fat.

b. As a source of essential fatty acids linoleic acid and linoleic acid.

c. Fat as a solvent vitamin also helps transport and absorption of vitamins A, D, E, and K.

d. Fat conserves protein for protein synthesis.

e. Fats help of gastric acid secretion and gastric emptying.

Gives special texture and delicious food.

As a lubricant and helps digestion of spending the rest.

Maintaining body temperature

Protects cardiac, liver, kidneys from impact and other hazards (Department of Nutrition and Public Health, 2009: 47)

4. Vitamin

Vitamins were first used by Casimir Funk (Poland) in 1912. Penemuan substance in rice bran can cure beri-beri. Zat is needed by the body for life and consist of element N (amine), hence the term vitamin. Vitamin function as follows:

- a. Vitamin A: for vision, growth and development, cell differentiation, reproduction and immunity.
- b. Vitamin D: can cure and prevent rickets.

c. Vitamin E: antioxidant, stimulate an immune response, preventing coronary heart disease, prevent miscarriages and sterilization

d. Vitamin K: *menadione*, functioning in the synthesis process *prothrombine* necessary in blood clotting. Vitamin K present in high concentrations in the kidneys. The lungs and bone marrow. On the absorption of vitamin K needed bile salts and fats (Department of Nutrition and Public ehatan Kes, 2009: 90-96)

5. Mineral

Mineral is a nutrient that the body needs in quantities

a little. Mineral functions include:

- a. As a precursor of an assortment of body tissues, such as bone and teeth.
- b. Catalysis reactions related to the breakdown of carbohydrates, fats, protein and fat, and protein formation mengatalisis body.
- c. A component of the enzyme.
- d. Assist in the delivery of nerve signal throughout the body.
- e. Regulate blood clotting process (the Department of Nutrition and Public Health, 2009: 108-110).

3. Nutritional Status Indicators

Based on local semi anthropometry Ciloto, 1991 has been recommended raw food WHO-NCHS reference in determining the nutritional status and the growth of individuals and society (I Dewa Nyoman Supariasa, 2001:73

Table 2.3 Nutritional Status According to WHO

INDEX	NUTRITIONAL STATUS	THRESHOLD (**)
Weight Loss by Age (W / A)	Nutrition More	> +2 SD
	Good Nutrition	> = -2 SD to +2 SD
	Malnutrition	<-2 SD to> = -3 SD
	Malnutrition	<-3 SD
Height by Age (TB / U)	Normal	> = -2 SD
	Short (<i>Stunted</i>)	<-2 SD
Badanmenurut Weight Height (BB / TB)	Fat	> +2 SD
	Normal	> = -2 SD to +2 SD
	Thin (<i>wasted</i>)	<-2 SD to> = -3 SD
	skinny	<-3 SD

Source: Health Ministerial Decree No. 920 / Menkes / SK / VIII / 2002

Nutritional Status Assessment

Assessment of nutritional status is divided into 2 direct assessment of nutritional status and nutritional status assessment indirectly.

1. Nutritional Status Assessment Direct

Assessment of nutritional status is directly divided into four ratings are: anthropometric, clinical,

biochemical and biophysical. But in this study using anthropometric assessment.

a. anthropometry

1. Understanding

Generally anthropometry means manusia. Seeing body size from a nutritional standpoint, the nutritional anthropometric measurements according to wide range of body dimensions and body composition of various age levels and nutrient levels (I Dewa Nyoman Supariasa, 2001: 19).

The use of anthropometry is generally used for unbalanced intake of protein and energy. This imbalance seen in the pattern of physical growth and the proportion of body tissues such as fat, muscle, and the amount of water in the body (I Dewa Nyoman Supariasa, 2001: 19).

b. Anthropometric indices

1. Weight for age (W / A)

Weight loss is one of the parameters which give an idea of the body mass. The body mass is very sensitive to changes mandadak, such as infection disease, decreased appetite or decrease the amount of food consumed. Under normal circumstances, where a state of good health and a balance between consumption and nutrient requirements is assured, then the weight body grows in following age. Instead in abnormal, there are two possibilities for the development of weight loss that can progress

faster or slower than normal (I Dewa Nyoman Supariasa, 2001: 56-57).

2. Height for age (H / A)

Height is the anthropometric picture skeletal growth. At high normal growing ages, body grow with increased height is not like weight, are relatively less sensitive to the problem of malnutrition in a short time. Effect of nutrient deficiency in height will become evident in a relatively long time (I Dewa Nyoman Supariasa, 2001: 57).

3. Weight for height (W / H)

Weight loss has a high linear relationship .In normal circumstances, developments will be unidirectional with growing weight height with a certain speed. Index W / H is a good indicator to assess the present nutritional status (now) (I Dewa Nyoman Supariasa, 2001: 58).

Of the various types of indexes, intpretation required threshold, the threshold required penentua deal nutrition threshold into three ways, namely percent of the median, percentiles, and standard deviation units.

1. Percent of the median

The median is the middle value of a population. In antropometrigizi equal to the median percentile .Pattern percent of the median% Median = (I Dewa Nyoman Supariasa, 2001: 69)

Table 2.4 Nutritional Status Based on Anthropometric Index

Nutritional status	BB / U	TB / U	BB / TB
good nutrition	> 80% >	90%	> 90%
moderate malnutrition	71% -80%	81% -90%	81% -90%
Malnutrition	61% -70%	71% -80%	71% -80%
Malnutrition	â %o ð60%	â %o ð7 0%	â %o ð70%

Source: K. Yayah Husaini ANthropometric As Index Nutrition and Public Health, Medika, No. 8 XIII, 1997. hlm.269. Note: Percent declared against the median NCHS book.

2. Percentile

Experts feel less satisfied with using percent median, finally choose how percentile. 50 percentile equal to the median or middle value of the total population are above and half are below it (I Dewa Nyoman Supariasa, 2001: 70) Unit 3. Standard Deviation (SD)

3. Standard deviation units

Also called Z-scores. Ara WHO to examine and monitor the growth (I Dewa Nyoman Supariasa, 2001: 70) .Rumus calculation of Z-scores are:

Z-scores = Source: Indonesian Nutrition, Vol. XV No. 2 in 1990.

b. Nutritional Status Assessment In Indirect

Assessment of nutritional status can indirectly be divided into three, namely food consumption surveys, vital statistics and ecological factors. In this study using consumption surveys with quantitative methods recall 24 hours.

a. Food Consumption Survey

Food consumption survey is a method of determining the nutritional status indirectly by looking at the amount of nutrients consumed and (I Dewa Nyoman Supriasa, 2001: 20).

b. benefits

The collection of food consumption data can provide an overview of the consumption of various nutrients in the society, family and individu. Survei can identify the advantages and disadvantages of nutrients (I Dewa Nyoman Supriasa, 2001: 20).

c. recall method

To be able to recall food properly, must first study the types of foods commonly consumed by the target group surveys. Therefore, it is sometimes necessary to survey pasar. The aim is knowing the target weight of each food consumed. Here are the steps it works:

1. Officer or interviewer asks back and record all food and drink consumed respondents in household size (URT).
2. Analyzing the material fed into nutrients using Composition List Foodstuffs (DKBM).
3. Comparing with Nutritional Adequacy Suggested List (DKGA) or the Nutrition Adequacy Score for Indonesia (I Dewa Nyoman Supriasa, 2001: 94).

4. Toddler

a. Understanding Toddlers

Toddlers are infants who are in the age range of 0-5 years. At this age a child's brain is growing very rapidly known as the golden age (the golden age), and during this time should be stimulated overall good health, nutrition, parenting and education.

2. Substance Power

Nutrients which generate power or energy is carbohydrates, fats, and proteins. For toddlers, energy is required to perform its activities as well as growth and development. Therefore, the nutritional needs power source toddler relatively greater than the power dewasa. Zat can be obtained from rice, corn, wheat, potatoes, corn and bread.

3. Zat Builders

Protein as a builder substance not just for physical growth and development of organs toddlers, but also replace damaged tissue. The builder substances contained in animal protein

This term is often heard and understood by all parents, because they want their children to grow up to be a bright child, but few take advantage of this opportunity, because they feel the child's growth is a natural process that will happen by itself without the interpretasi parents or anyone.

b. Characteristics of Early Childhood

Children aged 1-5 years are passive consumers, meaning that children receive what is food provided from mother. Under these conditions, we recommend that toddlers are introduced to a variety of foodstuffs. The rate of growth in infancy is greater than the period of preschool so that the required amount of food that is relatively larger. However, smaller stomach still cause the amount of food that is capable of acceptance in one meal is smaller than a child whose age was big. Otherwise the diet given was small portions and frequent frequency.

a. The role of food for Toddlers

1. Food as a source of nutrients

In food there are six types of nutrients, namely carbohydrates, fats, proteins, minerals, and nutritiona water. Element is in need for a toddler as energy substances, builder substances, and regulators

(eggs, chicken, fish, meat, milk.) And in vegetable proteins (nuts, tempeh, and tofu).

4. Regulators

a. Regulator serves to function organs and tissues of the body including the brain can run as expected, as well as to the members of the body maximum protection against attacks penyakit. Zat regulator can be obtained from all the vegetables and fruits that contain vitamins and minerals, such as orange, papaya, carrots, mustard greens and spinach.

b. The nutritional needs of toddlers The amount of nutrients to personal intake approximately enough to stabilize health regulation and generally. In underline that the amount of nutrients related to their age, gender, activity, weight and height.

6. Equivalently nutrient for toddler

Balanced nutrient are the composition of food daily which consist of many kinds and amount energy as much as Basal Metabolic Rate (Koalition Fortification Indonesia, 2011). Toddler raw material as important foundations for their health in the future. Globally the goal for reaching balaanced nutrients consumed as the *Millennium Develpoment Goals (MDGs)* 2015 that suggest by *UNICEF* (Soekirman, 2006 in Jafar, 2010).

According to Koalition for Fortification Indonesia in Wahyuningsih 2011, PGS watch 4 principles, there are:

- a. Food variations;
- b. Rules of Food consumed;
- c. The urgency of food variety and exercises;

The malnutritions for babies and toddler can be check by seeing two kinds syndrome such as: *Kwashiorkor*, caused by less protein consumed and *Marasmus* caused by less both protein and energy (Suhardjo, 2003).

7. Sustainable Food

The family capabilities to fulfilled their needed of food in quality and quantity amount.

7. Parenting

Nurture one of which relates to the pattern of consumption in the consumption keluarga. Pola is determined by the number and frequency of food available, ripening, distribution within the family and the eating habits of individuals (Soekirman, 2000). Pola parenting also has meaning family's ability to pay attention, time and support to children in order to grow well, such as exclusive breastfeeding, complementary feeding and weaning time breastfeeding.

8. Diet Toddlers

Diet is the way a person or group of people in choosing foods and foods such as physiological reactions, psychological, cultural, and social. This diet is also called the food patterns or eating habits (Suhardjo, 2014). According Khumaidi in Sri Handajani, (1994: 29), says that diet is the behavior of human groups in meeting the need for

food include the attitudes, beliefs, and selection of groceries. While Djiteng Rudjito, (212: 7), argues that the diet is the way in which a person or group of people to choose food and consume it as a reaction to the effects of physiological, psychological, and social culture.

There is also another opinion that says that the diet is information that gives an idea of the kinds and amount of food eaten every day by one person and it is typical of a particular group of people. (Sri Kardjati, 1985) The eating habits is a term to describe the habits of behavior associated with food such as manners of eating, the frequency of eating someone, the pattern of food eaten, beliefs about food, food distribution among family members, the acceptance of food (like it or dislikes) dan pemilihan materials to be eaten. So diet is an eating habits that exist in a particular community group atausuatu family in terms of type and quantities of foodstuffs in eating every day. Diet toddler distinguished ages. for toddlers under the age of one year in contrast to a toddler over one year. Toddlers aged 0-1 years is still referred to as a baby, with its main food is ASI / PASI and complementary foods. While children aged 1-5 years the food that is already been more varied.

a. 0-1 years old baby diet

The food is healthy infants were divided into two groups, the first is the main food of breast milk (ASI) / BMS (PASI). PASI or BMS granted if breastfeeding less or nothing at all. The second is a complementary food Consist fruits, biscuits, creamed foods, and food lembek. ASI in sufficient quantities is the best food and can meet the nutritional needs of infants 3-4 months, after age of 4 months, infants need supplementary food for needs increased infant nutrition and not entirely be met by breast milk. After the infants aged 3-4 months, gradually must be given complementary foods such as fruit juice or fresh fruit, creamed foods, and finally the food mushy. Feeding patterns of infants aged 0-1 years by age can be seen in table 1. Such follows:

Table 2.5. Infant Feeding Patterns 0-1 Year by age

Age	The type and frequency of meals
0-3 months	ASI at will
3-4 months	ASI, at will
4- 6 months	Fruit, 1-2 times a day
	ASI, at will
	Fruit, 1-2 times
6-9 months	Creamed foods, 1-2 times
	ASI, at will
	Fruit, 1-2 times
	Food creamed, 2 times
9-12 months	Mushy food, 1 time
	Breast milk / cow's milk full 2 times
	Fruit, 1-2 times
	Food creamed, 1 time
	Mushy food, 2 times
	Eggs, 1 time

b. Diet toddlers 1-3 years

At the age of 1-3 years old children are passive consumers. Food depending on what is provided mother. Milk teeth have grown, but can not be used to chew food too hard. But children should have been directed to follow the pattern of adult food.

c. Diet toddlers 4-5 years

According to Nutritionist Association of Indonesia (2014), At the age of 4-6 years old children are active consumers, that they had been able to choose the preferred food. They have to be given nutrition education both at home and in school not good to had to be implanted. For children aged 4-5 years, the mother should be able to familiarize children with foods that meet their nutritional needs,

so that the child will get used and liked the nutritious foods. If not, the mother must be creative food processing becomes an interesting food for toddlers .In diet consists of several parts, including the food menu, food items, eating / amount of material, and the frequency and mealtime.

9. Food supply

Nutrient intake greatly affects a person's nutritional status. Children who get a good intake but often has diarrhea can lead to children suffering from malnutrition. Food intake also depends on the education of family income, knowledge

10. Factors Affecting Nutritional Status Toddler

1. Education Mother

a. Definition of maternal education

Maternal education is a critical important. High low levels of maternal education is closely related to the level of knowledge of health care, hygiene antenatal and postpartum, as well as awareness of the health and nutrition of children and its family education also affect the socio-economic factors others such as income, employment, living habits, food, housing and education. Level also helped determine whether or not a person easily absorb and understand their nutritional knowledge. It can be used as a basis for distinguishing appropriate counseling methods. Of the interests of family nutrition, education needed to make a person more responsive to their nutritional problems in families and can take immediate action (Suhardjo, 2003).

b. Relationship Between Education Level Mother With Toddler Nutritional Status

Maternal education is a critical important, high low levels of maternal education is closely related to the level of knowledge of health care, hygiene antenatal and postpartum, as well as awareness of the health and nutrition of children and its education also affect the socio-economic factors others such as income, employment, living habits, food, housing and education. Level also helped determine whether or not a person easily absorb and understand their nutritional knowledge peroleh. Hal can be used as a basis for distinguishing the extension methods, interests of family nutrition, education is necessary for a person to be more responsive to their nutritional problems in families and can take immediate action (Suhardjo, 2003).

2. Mothers Work

a. Understanding the mother's occupation

Women as workers have the potential and this has been proven in the world of work is not

lost with pria. Sebagai workers, the problems women face more severe than man. Because in a woman first must overcome a family affair, husband, children and other things concerning the trappings home tangganya. Pada fact quite a lot of women who do not sufficiently address the problem, though technical capacity is quite high. When women are not good at balancing the dual role of a toddler eventually be displaced (Anoraga, 2005).

b. The relationship between maternal employment levels and nutritional status of children

Mothers who already have full employment will no longer be able to give full attention to toddler, let alone to take care of it. Although not all working mothers do not take care of his son, but busyness and workload dependents may cause a lack of maternal care in preparing dishes suitable for babies. Therefore in a study shows that often there is a discrepancy between the consumption of nutrients, especially energy and protein to body needs on a group of children older than 1 year (Moehji, 1995) One of the factors that may influence the occurrence of PEM is the mothers who receive regular job so must leave their babies from early morning until late afternoon, the children had to be left at home so fell sick and did not get the attention, and feeding is not done properly. It would be nice if the body is engaged in social accommodate babies and small children who left to work a full day in the village hall, mosque, church, or other place to be treated and given food quite good (Pudjiadi, 2003).

3. Family Income

a. Definition of Income

According Suhardjo (2003) in everyday life income is closely related to salaries, wages and other income received by a person after the person doing the work within tertentu. Ada some understanding of the definition of income, according to the Central Bureau of Statistics in accordance with the concepts and definitions. Definition of family income is all revenues and receipts received by all household members Economics (ARTE), revenue is the amount of real income of all

household members who donated to meet the collective needs and individuals in the home tangga. Dari above definition can be concluded that the revenue is everything form of income or real acceptance of all family members to meet household needs. Mention the household income is the total amount of revenue formal, informal income and revenue subsistem. Formal income, informal, and revenue subsystems referred to in the above concept is described as follows:

1. Formal income is income received from the main job.

2. Informal income is income earned from employment outside the main job.

3. Revenue subsystem is income derived from the production sector in value by money. So it is the family income is all income obtained from all members who work.

b. The relationship between family income with nutrient status

Generally, if incomes rise, the number and type of makana tends to come improved juga. Akan However, the quality of the food tidakselalu improved when applied to crops. Commercial crops replacing food production for the household and the income earned from the cash crops or other efforts to increase revenue is not earmarked for purchasing food or ingredient-bahanpangan high nutritional quality. Income level will determine the type of food that which will be purchased with the additional money. The higher the income, the greater the percentage of that income is used to buy fruit, vegetables and various types of foodstuffs lainnya. Jadi penghasilan merupakan important factor for the quantity and kualitas. Antara income and nutrition, there is clearly a beneficial relationship. Effect of increased income to the improvement of health and family circumstances other interaction with the opposite nutritional status is almost universal. Economists argue that with the improvement of the economic standard will support increased nutrient levels. But nutritionists can accept the notes, if only faktorekonomi are a determinant of status

nutritional problems are multi-complex because not only economic factors that play a role but other factors come menentukan. Oleh therefore improved nutrition can be considered as a tool or as a goal rather than development.

4. Knowledge mother

a. Understanding the mother's knowledge

One thing convincing about the importance of nutrition knowledge is based on three reality, namely:

Enough nutritional status is important for the health and well-being. Each person will only be enough nutrition if the food they consume is able to provide the nutrients needed for optimal growth. Nutritional science provides facts necessary so that people can learn to use food well for improved nutrition (Suhardjo, 2003).

Knowledge covered in the cognitive domain has six levels, namely:

a. Know (*know*) knows interpreted as considering a material that has been studied previously. Included in this rate is the recall (*recall*) to a specific of all the materials studied or stimuli that have been received.

b. Understand

(*Comprehension*) is defined as an ability to understand correctly describe about the object known, and can correctly interpret the material.

c. Application (*Application*) application is defined as the ability to use a material that has been studied in a situation or condition of real (true). Application here can be defined application or use of the laws, formulas, methods, principles and so in the context or other situations. Analysis (*Analysis*) analysis is the ability to describe the material or an object into components, but still within an organizational structure, and still something to do with one another.

d. Synthesis (*Synthesis*)

Synthesis showed an ability to lay or connect part in a whole new form. In other words, the synthesis of an ability to formulate a new existing formulations.

e. , Evaluation (*Evaluation*)

The evaluation relates to the ability to perform an assessment of the justification or materials or objek. Scoring-assessment is based on a self determined criteria or using criteria that have been there (Notoatmodjo, 1997). Knowledge of good nutrition will cause a person capable of preparing the menu is good for consumption. The more knowledge a person's nutrition, it will increasingly take into account the type and amount of food obtained for consumption (Sediaoetama, 2000).

b. Relationship Between the Nutrition Knowledge Mother With Toddler Nutritional Status

Knowledge of good nutrition will cause a person capable of preparing the menu is good for consumption. The more knowledge a person's nutrition, it will increasingly take into account the type and amount of food obtained for consumption (Sediaoetama, 2000). Lack of knowledge and misconceptions about food security and food values are common every country in the world. Poverty and lack of nutritious food supply is an important factor in the problem of malnutrition, another important cause of malnutrition is a lack of knowledge about and know the ability to apply that information in everyday life (Suhardjo, 2003).

5. Number of Family Members

Government programs through the Family Planning has advocated

happy prosperous small family norm is two children alone and the distance between each other child about 3 years old, so that parents can give love and attention to the child and the child should be getting the necessary requirements for growth and development. With even small families are economically more

profitable, more secure family welfare (Soetjiningsih, 1995: 124). He also revealed that a lot of children in families with sufficient socio-economic conditions, will result in reduced attention and affection received by children, especially when birth spacing is too close. Whereas in families with less economic level, the number of children a lot of addition will result in reduced affection and attention of children, also have an impact on the primary needs such as food.

6. Infectious Diseases

Infectious diseases are still a major cause of death, especially in children under 5 years of age. But children who died from the infectious disease, usually preceded by the nutritional state is less memuaskan. Rendahnya endurance due to poor nutrition greatly facilitate and accelerate the development of germs in malnutrition and infectious diseases actually the reciprocal relationship very close, so it is often difficult to define which of the circumstances that came, sometimes difficult to answer the question whether malnutrition that cause children to suffer from infections or diseases that cause child nutrition infeksiilah be bad. In many incidents occurred synergisitas between malnutrition and infectious diseases and the consequences that occur naturally very fatal (Sjahmien Moehji, 2003: 13).

Child nutrition deterioration due to infection is the decline in appetite eating due to the discomfort they experienced, so that the input of nutrients is reduced. Infectious diseases are often accompanied by diarrhea and vomiting which causes sufferers to lose fluid and a number of nutrients such as minerals, and so on. And also the increase in basal metabolism due to fever caused mobilization energy reserves in the body (Sjahmien Moehji, 2003: 13-14).

Infectious disease that often occurs in children are diarrhea and ISPA. Diare can cause a child has no appetite, causing a shortage of food and drink that enter the body, which can result in nutritional kurang. Anak suffering from diarrhea decreased fluid and disruption from the balance of nutrients and elektrolit. Serangan recurrent diarrhea

or acute diarrhea severe child malnutrition is a risk of death (Bulletin of Health Research, Vol.31 No.1, 2003: 2).

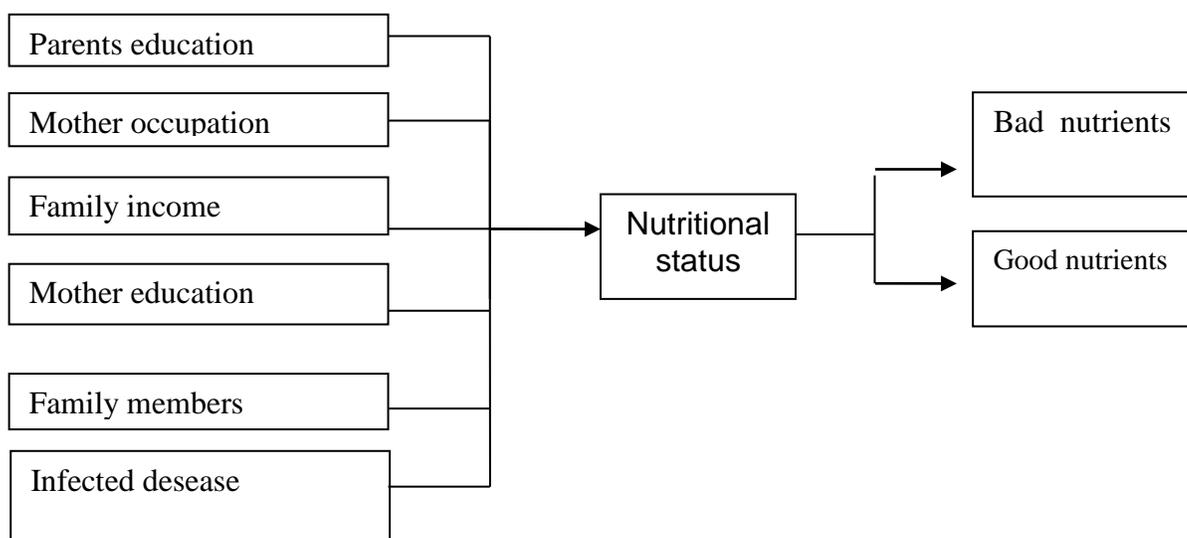
Infectious diseases can arise because of two factors: ministry health and environmental health.

1. Health services

The role of health centers in providing health services, especially services deemed important nutrition problem in analyzing the nutritional problems, despite efforts to address nutritional problems can be done individually at tingakt families, and society. This is proven by the UPGK (Family Nutrition

Improvement Effort). UPGK a family business to improve nutrition of all its members, especially group is done with the guidance and support of a wide range of sectors including PHC provide guidance and technical assistance can not be provided example is the training of cadres of health and education fields. People dealing with nutritional problems when having special knowledge and skills (Suhardjo, 2003: 33). Health services are performed by and for the people held in the garden of nutrition or postal weighing in the village. Toddlers who are sick are referred to the health center to get an inspection and service these patients require further treatment by the health center referred to the hospital (Suhardjo, 2003: 5)

Theoretical framework



Picture 1: literature Supariasa, Bakri, & Fajar (2002), Ferdous, et al (2013), Almatsier (2010), Isnansyah (2006), Taufiqurrahman (2013), dan Permana (2011)

C. Framework Concepts

The conceptual framework is a picture of this line of thought formulated study of facts, observations, and review of the literature (Saryono, 2011). The conceptual framework is

comprised of independent variables and the dependent variable. Following the conceptual framework of this study.

E. Research hypothesis

The hypothesis is provisional estimates from the research results. Hypothesis test is divided into two, namely a working hypothesis or alternative hypothesis (H_a) and the null hypothesis or statistical hypothesis (H_0). The hypothesis of this study will prove the truth of the research to be conducted. Based on existing theories and previous research results, the hypothesis in this study are:

- a. There hubungan between the mother's education level with Toddler Nutritional Status in Puskesmas Hedam
- b. There is a relationship between the level of employment to women with Nutritional Status Toddler in Puskesmas Hedam
- c. There is a relationship between family income with Toddler Nutritional Status in Puskesmas Hedam
- d. There is a relationship between knowledge of mothers with Status G IZI Toddler in Puskesmas Hedam
- e. A da relations between the large number of family members with Status G IZI Toddler in Puskesmas Hedam
- f. There is a relationship with the infectious disease status of G IZI Toddler in Puskesmas Hedam
- g. There is a relationship between the doings of the foster mother of the Nutritional Status Toddler in Puskesmas Hedam.

RESEARCH METHODS**A. Types of research**

This type of research is korelasdeskriptif research that aims to reveal the correlative relationships between variables. In this correlation study design involving at least two variables, with cross sectionaly at the time of the study, both measured variables simultaneously (Nursalam, 2003).

B. Time and place research.

When the study was conducted in November to December 2016 and the study was conducted in Public health centre Hedam

C. Population and sample

1. The population is all s ubyek research (Arikunto, 2012).Populasi in this study were mothers and infants in the region work Hedam Based on data from health Hedam found the number of visits to mothers with children under five every month amounted to 100 people
2. Samples are some of all object studied and considered to represent the entire population by kriteria inclusions (Notoatmodjo, 20 14). Methods of Sampling method total population. This is taking a whole sample of all members of the population. The inclusion criteria of this study are: Infants aged 6 months to <5 years had KMS with catatn results last weighing up the research. Normal birth / prematur.Bayi not in a healthy condition (not ill) Exclusion criteria in this study were:
 - a. Infants are cared for in addition to his mother
 - b. Subjects are not willing to participate in the study.
 - c. Do not have a fixed residence

D. Techniques Data Collection

1. Research tools

Attempts to obtain the relevant data required denganmasalah studied the data collection tool or instrument appropriate. In this study, researchers used the instrument include:

a.Nutritional Status Data:

1.Card Towards Healthy (KMS) Used to resulting weighing of the children under five, and to determine the nutritional status (Minarto 2011).

2.Standart raw WHO- NCHS nutritional status is used to determine the status nutrition four

categories: nutrition, good nutrition, malnutrition. Data mother's knowledge and Parenting Questionnaire

The questionnaire is in the form of a number of written questions that are used to determine the knowledge of mothers and parenting is used parents in improving the toddler, in two categories: knowledge and good parenting and knowledge and poor parenting. The question with a choice of a, b, c, to answer yes given a score: 2 and was not given a score: 1. Questionnaires were 23 questions and the questions of 15 questions on the nutritional status, 8 questions about parenting.

2. Data Collection Methods

Primary a.Data

Primary data is data obtained from sources of research by spreading questionnaires to mothers who have children aged 6 months to <5 tahun. Primar data includes data taken knowledge of mothers and parenting mothers of children that can affect the nutritional status of children aged 6 months to <5 years.

c. secondary data

Secondary data is primary data that has been processed further. Secondary data include how the number of infants and toddlers ages derived from these data puskesmas Hedam

E. Processing and Data Analysis

1. Prosedur data processing

According Sugiyono (2008) data processing is done by stages as follows:

a. editing

Questionnaires were completed by respondents in advance to confirm the edited data based on this editing stage charging kuesioner. Pada researcher checking the completeness of the data contained mainly in the

completeness of data both questionnaires and observation data. Editing is done to ascertain whether the questions were arranged in such a manner in accordance with the contents that will be tapped through the measuring instrument through a questionnaire. At this stage of the editing is done through the criteria for validity using a statistical test.

Coding is a method to convert the data for research into symbol. Teknik is done by providing a sign on each answer with a numeric code, and then inserted into the table to make it easier to read

After all questionnaires fully and completely, and had already passed coding, then proses data to be analyzed. Data processing is done by menentry data. Data Entry is a process of entering data into a computer data processing Statistical Program for Social (SPSS) 11.0for Windows system.

Cleaning (data cleansing) is an activity of rechecking the data already dientry whether there is an error or not. Such errors are possible on entry data to a computer.

2. Data processing

a. Data nutritional status Data

Nutritional status is obtained by calculating the nutritional status of the formula ZScore index of BB / U : (Arikunto 2006) $SDXXZ = \frac{X - U}{SD}$

âKeterangan: X = actual weight measurement results X = median weight for the raw value SD = standard deviation value

b. Data knowledge of mothers with parenting

Data nutritional status and the parenting of children obtained from questionnaires on mothers who have children under the age of 6 months to <5 years is about mothers with parenting children aged 6 months to <5 years with the score of the item in question (a, b, c) so that each respondent had a total score of pengetahuan mothers with parenting then do the

calculations. Total score of 10 to "23 means knowledge with good parenting and a score of 0 to 9 pattern.

3. Analysis Data

a. univariate analysis

The data analysis Univariate used to describe the characteristics of the study subjects by calculating the frequency distribution and the proportion of the factors that affect the nutritional status of both children under five in PHC Hedamyaitu mother's education, mother's occupation, family income, mother's knowledge about nutrition and infectious diseases the number of family members parenting.

Presentation of the results are presented descriptively.

b. The bivariate analysis

The bivariate analysis examines the major risks of independently variable to variable dependen research design was a *cross sectional study*, the analysis of the relationship is done by using a calculation *cross sectional* undertaken prevalence ratio (PR) allows to predict the relationship of the fact that studied the strength of the association obeying that is in use is the ratio prevalaensi (RP) due to variables that are obeyed compliance

Table. 3.1. Data analysis of *cross-sectional*

risk factors	Effect		amount
	Yes	No	
Yes	A	b	a + b
No	C	d	c + d
amount	a + c	b + d	a + b + c + d

Information

prevalence in the exposed group: $a / (a + b)$

prevalence in the group not exposed to: $c / (c + d)$

calculating the prevalence ratio (PR): $\frac{a / (a + b)}{c / (c + d)}$

Information :

- = the number of cases with a positive effect (+)
- = the number of controls with a positive effect (+)
- = the number of cases with negative effect (-)
- = the amount of control the negative effects of (-)

Interpretation of the value of OR:

- RP < 1 means the factor studied a protective factor for death
- RP = 1 means the factor under study is not a risk factor
- RP > 1 means the factor studied is a risk factor.

RP provisions are:

- Confidence interval or *confidence interval (CI)* of 95%
- Values of significance to see the risk factors with the cases found by the boundaries limit as follows:

Lower limit value (lower limit) = OR ()

Upper limit value (Upper limit) = OR () Where:

= *The natural logarithm of 2.72*

Interpretation of significance:

- a. If the value of LL and UL are under the value of 1 (one) or are above a value of 1 (one), then the value of RP gained influence meaningfulness.
- b. If the value of LL and UL includes a value of 1 (one), then the value of OR obtained does not have the effect of meaningfulness.

facilitate the exposure of the results found in the field.

E. Data presentation

The data has been processed and analyzed and then presented in tables and graphs accompanied by explanations / research data is intended to

F. Operational definition

Definition of Operations consists of two independent and dependent variables, independent variables: family that large, parental education, family income nutrition knowledge of food supplies, infectious diseases while the dependent variables include, nutritional.

Table 3..2. Operational definition

No.	variable	definition of Operations	Measuring instrument	The results of measuring / code	scale
1	Nutritional toddler status	Nutritional state is measured using the formula mm / u	anthropometry	1. Malnutrition 2. good nutrition	Nominal
2	The education level of the mother	Last Educational mother	questionnaires	1.Rendah (SD-SMP) 2.Tinggi (SMA-PT)	Nominal
3	Jumlah anggota family	Large core family members ie mother, father, and son.	questionnaires	1.> 4 anggota family 2. less 4 members kel	nouns
4	Works mother	Profession in live by mothers with stunting	questionnaires	1. It does not work 2. Work	Nominal
5	revenue keluarga	Total income in the form of money earned as parents of toddlers every month	questionnaires	1.A % ≥Rp2.400 month 2.> Rp2.400 month	Nominal
6	Knowledge of nutrition about ibutentang	Mother knowledge about nutrition, including breastfeeding, food was good for toddlers,	questionnaires	1. Less 2. Good	Nominal
7	infectious diseases	Infectious disease ever suffered by a toddler in the last 3 months example	questionnaires	1.penyakit 2. No disease	Nominal

Diarrhoea,
Measles and Ispa

RESULTS AND DISCUSSION

A. Overview Location Research

PHC Abepura has existed since the Dutch era, located next to the Hospital Abepura with service facilities provided sufficient like their waiting room, the room is the Head, Administration, counters, cards, Poli General, Poli dental, laboratory, KIA, immunization and nutrition.

Commencing on October 1, 1998 moved the service in front of the Village Hedam with a working area of 3 villages and three villages, namely the village Enggros, Koya Koso, Nafri and villages Hedam, Awiyo, Asano. Have 6 pustu ie, Housing IV, Awiyo, Asano, Enggros, Nafri and Koya Koso. PHC facilities are available at the PHC long time with the addition of VCT space and Sanitation Space.

On February 2, 2010 stood PHC Abepantai with work areas 1 and 4 village Village Abepantai (Enggros, Nafri, Koya Koso, Koya Coral). With the establishment of health centers Abepantai and arrangement of the city (District Heram establishment and the entry Kotaraja to Abepura district) then Puskesmas Abepura currently includes six villages have 3 (pustu) and 33 Posyandu.

Limit Puskesmas Abepura Since February 2, 2010, namely:

Bordering Northern Health Center Kotaraja

The western side with PHC Waena

East side with PHC Abepantai

Puskesmas Abepura consists of 6 Village include:

a. Village of Hedam (sign Heram District)

- a. Village of New Town
- b. Village of Yobe
- c. Village of Waimhorok
- d. Village of Awiyo
- e. Village of Asano

The existing workforce at the health center Abepura Per-May 2010 consists of:

15 Workforce With Latest Education Dentist 2, General Practitioner 2, SKM 5, S1 Saspol 1, Pharmacists 1, D3 Didan 4, D3 Kesling 2, D3 Peawatan 10, D3 Nutrition 2, D3 Pharmacy 2, D1 Midwives 6, SPPH 2, SMF 1, SMAK 3, SPK 3 vjumlah overall 46 Power Keja

B. RESEARCH RESULT

a. Univariate analysis

Univariate analysis performed on each variable research. In this analysis will produce a frequency distribution and percentage of each of the variables related to the nutritional status of children in the family as parents of toddlers in urban village Puskesmas Hedam Hedam. The variables analyzed in this study is the level of education, level of mother's knowledge, employment status, income

Table 4.2 menunjukkan that the status of malnutrition among children under five are 61 people (59.8%) and a good nutritional status as many as 39 people (38.2%) level of higher education as many as 59 people (57.8%) the majority of respondents have educational tingkat low of 40 people (39.2%) of respondents work that is not working as many as 56 people (54.9%) and low maternal employment as 44 orang (43.1%) low-income families as many as 37 people (36.3%) and high

income sebnyak 63 people (61.8%) the majority of respondents have less knowledge as many as 43 people (42.2%) and the majority of respondents have tingkat pengetahuan over 57 people (55.9%) the number of family members as many as 64 people (62.7 %) of respondents were exposed to disease history penyaki many as 66 people (64.7%) and were not affected by the disease by 34 people (33.7%)

b. analysis Bivariat

The bivariate analysis in this study were obtained from the data level of education, level of

mother's knowledge, employment status, household income, number of family members, infectious diseases, the nutritional status of children. In order to test the hypothesis used chi square analysis with SPSS for Windows release to determine whether there is a relationship between independent variables and the dependent variable.

a. The relationship between education level Mother with Toddler Nutritional Status

Table 4.2. The relationship between the mother's education level nutritional status

No.	Education	Nutritional status				N	%
		Less		Good			
		N	%	N	%		
1	High	36	61.0	23	39.0	59	100
2	Low	24	60.0	16	40.0	40	100
Total		60	60.6	39	39.4	100	100

P Value = 1.000; RP 1017; CI 95% (0735 to 1.407)

Primary data 2016

Based on table 4.2 above, note that of the 59 women who are highly educated are 36 (61.0%) were the nutritional status of children under five mostly lacking, and Stus good nutrition are only 23 (39.0%), while 40 mothers were educated low, there were 24 (60.6%) were less nutritional status, and little good nutritional status 16 (40.0%)

Results of statistical test *Chi square* on a significance value of 95% ($q < 0.05$) was obtained *p-value* of 1.000 or $p < (0.05)$ thus there between maternal education tingkat the nutritional status of children in urban village Public health Centre Hedam.

b. Hu relationship between Level Pe kerj a a n Mother with Toddler Nutritional Status

Table 4.3. Hubungan between Job Status Mothers with Nutritional Status Toddler

No.	Work	Nutritional status				N	%
		Less		Good			
		N	%	N	%		
1	Does not work	35	62.2	21	37.5	59	100
2	Work	26	59.1	18	40.9	44	100
Total		61	61.0	39.0	87.0	100	100

P Value = 0.888; RP 1.058; CI 95% (from 0.769 to 1455) Primary data 2016

Based 4.3 in table above, note that of the 59 women who did not work there were 35 (62.2%) were the nutritional status of children under five mostly lacking, and Stus good nutrition are only 21 (37.5%), while of 44 working mothers there were 26 (59.1%) were less nutritional status, and little good nutritional status of 31 (37.5%)

Results of statistical test *Chi square* on a significance value of 95% ($q < 0.05$) was obtained

Table 4.4. The relationship between income Families with Toddlers Nutritional Status

No.	Income	Nutritional status				N	%
		Less		Good			
		N	%	N	%		
1	Low	23	62.2	14	37.8	37	100
2	High	38	60.3	25	39.7	63	100
Total		61	61.0	39	39.0	100	100

P Value = 1.000; RP 1031; CI 95% (from 0.747 to 1421) *Primary data 2016*

Based 4.4 in table above, note that of the 37 low-income women who are 23 (62.2%) were the nutritional status of children under five mostly lacking, and Stus good nutrition are only 14 (37.8%). while of the 63 high-income women who are 38 (60.3%) were less nutritional status, and little good nutritional status of 25 (39.7%). Results of statistical test *Chi square* on a

p-value of 0.888 or $p < (0.05)$ thus there hubungan between maternal employment t with nutritional status of children in urban village Puskesmas Hedam Relationship between Family Income Toddler with Nutritional Status Hu relationship between the level of Mother income with Toddler Nutritional Status

significance value of 95% ($q < 0.05$) was obtained *p-value* of 1.000 or $p < (0.05)$ thus there hubungan between tingkat pendapatan mothers with nutritional status of children in urban village Puskesmas Hedam Hedam when the relationship between Knowledge level Mother with Toddler Nutritional Status

Table 4.5 Relationship between Knowledge Level Mother with Toddler Nutritional Status.

No.	Knowledge	Nutritional status				N	%
		Less		Good			
		N	%	N	%		
1	Less	27	62.8	16	37.2	43	100
2	More	34	59.6	23	40.4	57	100
Total		61	61.0	39	39.0	100	100

P Value = 0.911; RP 1.025; CI95% (0.769 to 1.441) *Primary data 2016*

Based 4.5 in table above, note that of the 43 mothers who are less knowledgeable, there are 27 (62.8%) were the nutritional status of children under five mostly lacking, and Stus good nutrition are only 16 (37.2%). while of the 57 mothers who are knowledgeable over 34 (59.6%) were less nutritional status, and little good nutritional status 23 (40.4%)

Results of statistical test *Chi square* on a significance value of 95% ($q > 0.05$) was obtained *p-value* of 0.999 or $p > (0.05)$ thus no hubungan between tingkat knowledge of mothers with nutritional status of children in urban village Puskesmas Hedam Hedam

e.The relationship between the amount of Anggo ta keluarga Mother with Toddler Nutritional Status

Table 4.6. Relationship between Numbers of Family Members with the Nutritional Status Toddler

No.	JumlahKeluarga	Nutritional status				N	%
		Less		Good			
		N	%	N	%		
1	> 4	36	56.2	28	43.8	64	100
2	<4	25	69.4	11	30.6	36	100
Total		62	61.0	39	39.0	100	100

P Value = 0.278; RP 0.810; CI 95% (0.596 to 1.100)

Based 4.6 in table above, note that of the 64 mothers who number more family members there were 36 (56.2%) were the nutritional status of children under five mostly lacking, and Stus good nutrition are only 28 (43.8%). while of the 36 mothers whose low number of family members there are 25 (69.4%) were less nutritional status, and little good nutritional status 11 (30.6%)

Results of statistical test *Chi square* on a significance value of 95% ($q > 0.05$) was obtained *p-value* of 0.278 or $p > (0.05)$ thus no relation between the number of family members with the nutritional status of children in urban village PHC Hedam relationship between Infectious diseases with Nutritional Status Toddler.

f.The relationship between infection with Nutritional Status Toddler

Table 4.7. The relationship between the Infectious Diseases denganStatus Toddler Nutrition

No.	Pain History	Nutritional status				N	%
		Less		Good			
		N	%	N	%		
1	There is	43	65.2	24	88.9	27	100
2	There is no	18	52.9	16	47.1	73	100
Total		61	61.0	39	39.0	100	100

P Value = 0.995; RP 1.231; CI 95% (1,769)

Primary data 2016

Based 4.7di table above, note that of the 27 children affected by the disease are 43 (65.2%) were the nutritional status of children under five mostly lacking, and Stus good nutrition are only 24 (88.9%). while of the 73 children who are not exposed to diseases is low, there are 18 (59.2%) were less nutritional status, and little good nutritional status 16 (41.7%)

Results of statistical test *Chi square* on a significance value of 95% ($q > 0.05$) was obtained *p-value* of 0.995 or $p > (0.05)$ thus no hubungan between infection with the nutritional status of children in urban village Puskesmas Hedam Hedam

C. DISCUSSION

1. Relationship between the mother's education with infant nutritional status

Results of statistical test *Chi square* on a significance value of 95% ($q < 0.05$) was obtained *p-value* of 1.000 or $p < (0.05)$ thus there relation between maternal education level the nutritional status of children in urban village PHC Hedam Kedam

Lack of knowledge and education of parents, especially the mother were factors underlying terppenting because it affects the ability of individuals, families and communities to manage existing resources to get enough food ingredients

as well as the extent to which health-care facilities, nutrition and environmental sanitation are utilized to the best available The good (MOH, 2000).

Furthermore, low levels of education can lead the lack of understanding of what is needed in the care of the optimum development of children. These results are consistent with the results of research conducted by Hartono (2003), which revealed that there is no relationship between the growth of infants aged 6-12 months with the mother's education.

2. Mothers Work Relationships With Nutritional Status

Results of statistical test *Chi square* on a significance value of 95% ($q < 0.05$) was obtained *p-value* of 0.888 or $p < (0.05)$ with no between maternal employment tingkat with nutritional status of children in urban village PHC Hedam

The results are consistent with the results of research Miko (2003) and Harsiki (2003). In research Miko (2003) found the proportion of malnutrition among children aged 6-60 months who have not worked more mothers (22.4%) compared with children who have working mothers (19.9%) in the district of Tasikmalaya regency Bojongasih.

Meanwhile, according to Astuti (2004) which analyzed data Susenas 1990 in five urban areas, namely Medan, Palembang, Bandung, Semarang and Surabaya, showed that maternal employment status related with Nutritional Quality Food (MGM).

MGM mothers who work have higher than those whose mothers did not work and the MGM subsequent impact on the nutritional status of children. 100 Working mothers have different levels of education. With the level of higher education is expected to have a better level of knowledge and will affect the attitude of the mother in feeding patterns of children under five is good. In the course of working mothers time given to a toddler would be less than mothers who are not working, but working mothers can improve the quality of nutrition for infants with increasing family income.

3. Knowledge Capital Relationship With Nutritional Status

Results of statistical test *Chi square* on a significance value of 95% ($q > 0.05$) was

obtained *p-value* 0,999 atau $p > (0.05)$ thus there hubungan between knowledge of mothers with nutritional status of children in urban village Puskesmas Hedam Hedam

The results of this study are not consistent with the results of research Simanjuntak (2002) which states that children under nourished and knowledge of his mother's well more than with the knowledge of nutrition is low and concluded that there was significant relationship between knowledge of mothers with nutrition status of children under five in Sub Martoba and Siantar Siantar Marihat.

Lack of knowledge and misconceptions about food needs and the value of food is a problem that has been umum. Salah one because malnutrition is a lack of knowledge about nutrition or the ability to apply that information in everyday life.

The level of maternal nutrition knowledge is indispensable for mothers, especially mothers with young children or for babysitters balita. Karena and nutrition security needs of toddlers depends on the consumption of food given by the mother or the babysitter. A mother will strive to meet the nutritional needs of each family member.

4. Relationship With Family Income Nutritional Status

Increasing the family income can improve the nutritional status of children balita. Sebagian large families with good incomes who have children good. This status means the better the nutritional status of children balitanya. Hasil statistical test *Chi square* on a significance value of 95% ($q > 0.05$) was obtained *p-value* 0.995 or $p > (0.05)$ thus no hubungan between tingkat pendapatan mothers with nutritional status of children in urban village Puskesmas Hedam Hedam

These results differ by Berg (1986) which states that there is a relationship between the level of family income with gizi. Sedangkan status Original research results (2003) states that there is a significant difference in the proportion of PEM on family income per capita is less with family income per capita enough.

The level of income is a factor that determines the quality and quantity of food that low causing low purchasing power. Mampumembeli so no food in the quantities required and ultimately

adversely impact the nutritional status of a toddler.

5. Relationships With Family Members Number of Nutritional Status

Results of statistical test *Chi square* on a significance value of 95% ($q > 0.05$) was obtained *p-value* of 0.278 or $p > (0.05)$ thus no hubungan between the number of family members with the nutritional status of children in urban village PHC Hedam

The results of this study differ from research Miko (2003) and kalsum (2005). Miko study (2003) showed the incidence of malnutrition among children with a number of family members $\hat{a} \% \text{ ¥ } 5$ more people (35.9%) compared with the number of children whose family members $\hat{a} \% \text{ □ } 4$ people (9.1%) in the District of Bojong Asih Tasikmalaya regency.

The results of this study can be concluded that the number of family members does not affect the nutritional status of children under five. But aggota number of families and the number of infants in the family will affect the level of food consumption is the number and distribution of food in the household. With a large number of family members without coupled with uneven distribution of food will cause a toddler in the family suffering from malnutrition.

Number of family members is an important indicator in the distribution of food. The more the number of household members, will be smaller distribution to each member. It becomes vulnerable if they occur in families with limited economic social.

CONCLUSIONS AND SUGGESTION

Based on the results and the discussion concluded as follows:

1. There is relation between maternal education level the nutritional status of children in urban village Puskesmas Hedam Hedam when viewed from the *P Value* = 1.000 ; RP 1017 ; CI 95% (0735 - 1 , 407)
- 2.No relation between maternal employment level with nutritional status of children in urban village Puskesmas Hedam Hedam *P Value* = 0.888 ; RP 1.058 ; CI 95% (0, 769 - 1455)
- 3.There is relation between the mothers income with nutritional status of children in urban

6. Relationship Infectious Diseases With Nutritional Status

Infectious diseases were seen in this study is a mild infectious disease. Results of statistical test *Chi square* on a significance value of 95% ($q > 0.05$) was obtained *p-value* of 0.995 or $p > (0.05)$ thus no hubungan between infection with the nutritional status of children in urban village PHC Hedam.

Malnutrition will lower the immune system and increase the risk of infectious diseases. Infectious diseases in children will interfere with the metabolism that make hormonal imbalance and disrupt immune function. So the child is hit by recurrent and chronic infections will be impaired nutrition and immunity both in absolute terms and relative (Syamsul, 1999) in Minarto (2006).

The lack of association between infection with nutrition status may be due to the comparison of the number of underweight children less suffering from mild infection in this study is greater than toddlers who suffer from severe infections.

The results are consistent with the results of research conducted by Farida (2002), which revealed that there was no association between infection with a time of increased nutritional status of children in the PMT program in South Bogor subdistrict. But this result contradicts the Tarin (2001) which mengungkapakan that infectious diseases memepengaruhi nutritional status.

village Puskesmas Hedam *P Value* = 1.000 ; RP 1.031 ; CI 95% (0, 747 - 1421)

4.No relation between tingkat knowledge of mothers with nutritional status of children in urban village Puskesmas Hedam Hedam *P Value* = 0,911 ; RP 1.025 ; CI 95% (0 , 769 - 1.441)

5.No Relation between the number of family members with the nutritional status of children in urban village PHC Hedam Hedam *P Value* = 0.995; RP 1.231; CI 95% (1,769)

6.No relation between infection with the nutritional status of children in urban village Puskesmas Hedam Hedam *P Value* = 0.278 ; RP 0.810 ; CI 95% (0, 596 - 1,100)

B. SUGGESTION

for researchers

The results of this study can be expected to be a consideration for the next nutrition research to

crack lanjut.puskesmas order to further increase education about nutrition through mass media

2. Officer nutrition should be more keen to see the problems that occur, such as a cadre less active currents in the locker

BIBLIOGRAPHY

1. Achmad Djaelani S, 2000, Science of Nutrition for Students and Professionals Volume I, Jakarta: Dian Rakyat
2. Dahlia, S. (2012) .Pengaruh positive deviance approach to improving the nutritional status balita.Jeneponto.Media Community Nutrition Indonesia, 2 (1) .Retrieved October 10 2013.an society. Jakarta: Rajawali Pers.
3. Department of Nutrition and Public Health, 2009, Nutrition and Health Community Jakarta: Rajawali Pers.
4. Dewi Andarwati, 2007, Factors Relating to the Status GiziBalita on Family Farmers in the village Purwojati Kertek District of Wonosobo, Download date of 25 April 2010, <http://www.digilib.unnes.ac.id> .
5. I Dewa Nyoman Supariasa, 2001, the Nutritional Status Assessment, Jakarta: Gramedia.
6. Measure Ingan Tarin, 1995 and 1998, Factors Associated denganStatus Child Nutrition Age 6-36 months Prior and Current Economic Crisis in Central Java. Vol.31 # 1, 2003, pp 1-11.
7. Ministry of Health. (2010).Guidelines cadres series of children's health. Retrieved October 22, 2013, from <http://www.gizikia.depkes.go.id/wp-content/uploads/downloads/2011/01/Buku-Kader-Seri-Kesehatan-Anak.pdf>
8. Ministry of Health. (2011). Minister of Health of the Republic of Indonesia No. 1995 / Menkes / SK / XII / 2010 on standard anthropometric assessment of nutritional status of children. Retrieved June 16, 2013, from <http://gizi.depkes.go.id/wp-content/uploads/2012/11/buku-sk-antropometri-2010.pdf>
9. Notoatmodjo, S. (2000). Medical Research Methodology. Jakarta: Rineka Reserved
10. Nursalam. (2003). The concept and application of nursing science research methodology: guidelines for thesis and research instruments. Jakarta: Salemba Medika
11. Proverawati, A., & Asfuah, S. (2009). Nutrition textbook on obstetrics. Yogyakarta: Nuha Medika
12. Sandjaja, et al. (2010) .Gizi. Jakarta: PT. Kompas Media Nusantara.
13. Santoso. 2004. Health and Nutrition. Jakarta: Rineka Reserved.
14. Saryono. (2011). Nursing research methodology. Purwokerto: UPT Printing and Publishing UnSoed.
15. Sediaoetama, Achmad Djaeni. 2006. Nutrition Science for Students and Professionals. Jakarta: Dian Rakyat.
16. Sjahmien Moehji, 2002a, Nutritional Sciences: Basic Knowledge of Nutritional Sciences, Jakarta: Sinar Sinanti Papas. , 2003b, Nutritional Sciences: Reducing Malnutrition, Jakarta: Sinar Sinanti Papas.
17. Soengeng Santoso and Anne Lies Ranti 2004, Health and Nutrition, Jakarta: Rineka Reserved
18. Soetjningsih, 1995, Growth, Jakarta: EGC. Solihin Pudjiaji 2005, Clinical Nutrition Science In Children, Jakarta: Faculty of Medicine, University of Indonesia
19. Sunita Almatsier, 2001, the Basic Principles of Nutritional Sciences, Jakarta: Gramedia
20. Suhardjo, et al, 1986, the Food Nutrition and Agriculture Jakarta:

UI Press. , 2003. Food and Nutrition Planning. Jakarta: Earth Literacy. , 2003.Berbagai How Nutrition Education. Jakarta: Earth Literacy

21. Sugiyono 2004, Statistics for Medical and Health, Jakarta: Binarupa Script.
22. Supariasa, IDN, Bakri, B., & Dawn, I. (2002). Assessment of nutritional status. Jakarta