

The Identification of Nutritional Status Development based on WHO Child Growth Standard at Bhayangkara Kindegarten (TK) Jember Police Resort

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Abstract. Parents should be well-informed about toddler's nutritional status. Providing early childhood nutrition and cognitive development, improving nutrition also impact the primary education and improvements of maternal health. This research aims to identify toddler's nutritional disorders at TK Bayangkara Polres Jember. It is a quantitative research based on cross-sectional study. The research results are analyzed through descriptive analysis. The result showed that 19,7 % of the childrens are overweight , 4,1 % are underweight and 3,2% are severely underweight. Under-nutrition (underweight and severely underweight) can have health consequences such as stunted, physical growth and severely impaired cognitive development, and other health problems. Over-nutrition (overweight) can lead to non-communicable diseases (NCDs) such as type II diabetes, hypertension and some types of cancer. Parents should be provided with Health education such as early detection and how to prevent kids from nutritional disorder as lifestyle, access to healthy food, inadequate parenting, water quality, and inadequate health services are obviously related to malnutrition at the family level.

1. Introduction

Based on the report result of MDG's 2014, the percentage of people under the national poverty line is about 11,25 %. It apparently decreases compared to that of 1990 (15,10%). However, the decrease is still beyond MGGs target of 7,55 % in 2015. Poverty will likely impact the people's animo of food, that it eventually will give further impact towards malnutrition. The malnutrition prevalence in regency in 2014 was about 11,7%, while the prevalence of malnutrtrion was about 1,61%, with 9 toddlers of malnutrition with clinical symptoms were treated, BB/TB malnutrtrioned toddlers with severely thin were about 128 kids.

Toddlers nutritional status is the most imprtant thing to know by parents. Moreover, toddler's growth needs to be taken into serious consideration as some facts have shown that malnutrition occuring at the golden age is apparently irreversible. Malnutrition has long been a major public health concern globally leading to high morbidity and mortality among under-five children [1]. Around 16 % of toddlers in Indonesia suffer from light or even serious nerve and brain disorder [2]. According to (2006), Every 2 out of 1,000 babies suffer from motoric development disorders and therefore it is necessary to carry out immediate diagnosis and conduct therapy for the healing process. Impaired motoric development is influenced by several factors such as genetics, nerves, hormones, secular

tendencies, socioeconomic status, weather and climate, level of activity, disease, birth defects and nutritional status [2].

According to the World Human Organization (WHO) standard reference to assess children's nutritional status is by WHO Child Growth Standard, which measures weight for age (BB / U), weight for length/height (BB / TB), and height-for-age (TB / U), while the classification includes normal, undernutrition and overnutrition. To overcome malnutrition, the family role, health practitioners, government or teachers are considerably needed. The government must improve the quality of Post of integrated service of health (Posyandu) and early childhood education schools are not only for weighing and vaccinating, but they must be improved in terms of nutrition counseling and the quality of supplementary feeding and child development monitor.

2. Reference Review

Nutritional status is a measure of success in fulfilling nutrition for children which is indicated by the child's weight and height. Nutritional status is also defined as the health status produced by the balance between nutrient needs and input. Nutritional status research is a measurement based on anthropometric and biochemical data and history of diet [3].

Child growth is universally used to assess adequate nutrition, health and development of individual children, and to estimate overall nutritional status and health of populations. Nutritional status defines the health status through the balance between nutrient needs and intake [4]. Growth assessment is one of the most important information sources in diagnosing growth disorder and malnutrition in children [5]. Assessment of nutritional status by anthropometry is the simplest and most useful tool for assessing the nutritional status of children. Based on WHO Child Growth Standards applied in Bangladesh Demographic and Health Survey 2011 show that weight-for-age is a good overall indicator of a population's nutritional health, because weight-for-age is a composite index of weight-for-height and height-for-age, and thus does not distinguish between acute malnutrition (wasting) and chronic malnutrition (stunting) [6].

The WHO Child Growth Standards are used here instead of the previously used NCHS/CDC/WHO reference because of the prescriptive, rather than descriptive, nature of the WHO Child Growth Standards versus the NCHS/CDC/WHO reference. The WHO Child Growth Standards identify the breastfed child as the normative model for growth and development, and document how children should grow under optimum conditions and infant feeding and child health practices [6].

Assessment of nutritional status by anthropometry in Indonesia using anthropometry standard for the assessment of children's nutritional status based on Ministry of Health Republic of Indonesia Kepmenkes No.1995/Menkes/XII/2010. That is anthropometry standard assessments is also refer to WHO 2005 (WHO Child Growth Standard). Assessment of nutritional status based on WHO Child Growth Standard and Kepmenkes No.1995/Menkes/XII/2010:

- a. Severe underweight means weight-for-age < -3 SD
- b. Underweight means weight-for-age is -2 SD to -3 SD
- c. Normal nutrition means weight-for-age is -2 SD to 2 SD
- d. Overweight means weight-for-age is > 2 SD

Child malnutrition, encompassing both undernutrition and overweight, are global problems with important consequences for survival, incidence of acute and chronic diseases, healthy development, and the economic productivity of individuals and societies. Child undernutrition, including stunting, wasting, and deficiencies of essential vitamins and minerals, was the subject of a Series [7]. Nutritional status including undernutrition and overnutrition depends on many factors, the study was shown that exclusive breastfeeding for 6 months, age at which the child started complementary feeding, per capita income, maternal illiteracy, maternal occupation and adequacy of maternal dietary knowledge were found to have significant association with the nutritional status of children [1], [8].

3. Method

It was quantitative research and based on cross-sectional study. A total of 122 childrens aged 3-5 years were studied using total sampling method at TK Bayangkara Polres Jember. Data collection was carried out by measuring the kids' height and weight and then the nutritional status was measured. Data analysis was conducted using descriptive data analysis.

4. Result and Achieved Output

Nutritional status in this study was measured by using body weight-for-age (BB/U) to determine the status of severe underweight, underweight, normal nutrition and overweight. The following image describes children's nutritional status at the Bayangkara Kindergarten in Jember District Police (resort).

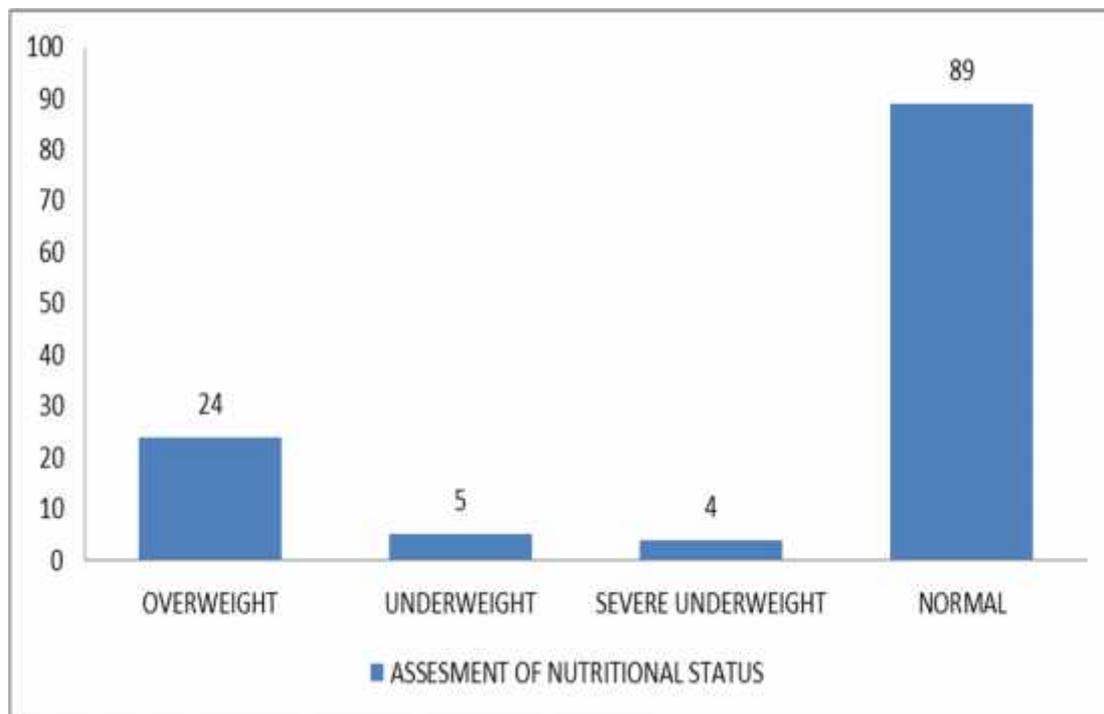


Figure 1 The distribution of respondent's nutritional status

Figure 1 indicates that most (89 children) have normal nutritional status. Yet, still 33 children experience nutritional status disorders, with 24 children (19.7%) experience overweight, 5 children (4.1%) experience underweight and 4 (3.2%) experience severe underweight. Nutrition is an important factor for children's growth, development. 'Good nutrition' is fundamental for a productive life, but at the moment malnutrition is a Public Health problem worldwide [9]. Good nutrition provides important energy and nutrients to sustain life and improve physical, social, emotional and cognitive development [10]. Malnutrition is the coexistence of both undernutrition and overnutrition in the same population across the life course [11]. Undernutrition (in this research is underweight and severe underweight), defined as the outcome of insufficient food and nutrients intake or to overnutrition, defined as the overconsumption of food and/or nutrients such that adverse medical effects can occur [9].

The research results showed that still 33 children suffer from nutritional status disorders, with details of 24 children (19.7%) experiencing over nutrition, 5 children (4.1%) experiencing malnutrition and 4 (3.2%) experiencing malnutrition. This indicates that Double Burden of Malnutrition has occurred at Bhayangkara Jember Kindergarten due to some children still with poor nutrition and malnutrition, while other children gain more nutrition.

The determinant factor which causes Double Burden of Malnutrition in Indonesia is due to lack of public awareness of mothers and children's nutritional problems of, lack of knowledge, maternal education level, distance of birth and birth weight are known to significantly affect the incidence of malnutrition [12]. Based on the WHO's "conceptual framework of malnutrition" behavior, lifestyle, access to healthy food, inadequate practice and behavior, quality of water, food safety sanitation and inadequate health services are also the causes of malnutrition at the family level [13]. The concept developed by the United Nations Children's Fund (Unicef) in 1990, that nutritional problems are mainly caused by direct as well indirect factors. Direct factors cause nutritional problems due to lack of food intake and illness. Someone with less nutritional intake will obtain poor body resistance and it eventually causes easy pain. In contrast, sick people will lose appetites that nutritional status consequently becomes less. Thus, nutritional intake and disease have interdependent relationships. The lack of food intake is caused by the unavailability of food. Lack of food intake is also caused by parental behavior or parenting including improper food distribution. For instance, parents are more concerned with jewelry purchase rather than sufficient nutritious food provision. Infectious diseases are caused by lack of health services in the community and unhealthy environmental conditions. The high level of illness is also caused by poor parenting such as children dirty places permitted (Nutritional Status Assessment, 2017).

5. Conclusion

Thus, 33 out of 122 kids observed deal with nutritional disorder. Out of the 33 kids, most of them suffer from overweight disorder (24 kids), while 5 kids suffer from underweight problem and another 4 kids suffer from severely underweight problem. This indicates that family influence plays a pivotal role in controlling the kids' eating habits. In addition, teachers at school contribute in the kids' growth especially in relation to underweight as well as overweight problems. This research will hopefully provide benefits for parents as well as teachers to observe the kids' growth.

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