

“The Causes of Malnutrition in Indonesia A Literature Study”

Chairany Fadilah^{1*}, Nur Faizah Romadona²

¹Early Childhood Education, Sekolah Pascasarjana Universitas Pendidikan Indonesia

²Early Childhood Education, Sekolah Pascasarjana Universitas Pendidikan Indonesia

Email: ingarany@upi.edu

ABSTRACT

Malnutrition has always been a concern in the world, including Indonesia. Malnutrition is an individual nutritional problem that can be observed both externally and internally based on the nutritional intake consumed. Balanced nutrition is the key to optimal growth and development. Excess or lack of nutrition has a negative impact on survival, especially for children. In the first days children must get good and balanced nutrition in order to have a strong immune system so that it is difficult to be exposed to disease and grow and develop optimally. The writing of this article uses a literature review research method, which aims to identify and describe the causes of malnutrition based on research results that have been proven to be true. Global nutrition problems have an impact on the layers of society who are in small groups, including households. Parents find it difficult to access education, employment and food availability, thus affecting family conditions, including children's health. Children do not get a balanced nutritional intake so that it inhibits growth and development and lowers the body's immunity. Finally, children are easily and quickly infected with diseases and invite various nutritional problems.

Keywords: *Children, Malnutrition, Nutrition, Nutritional Problems*

1. INTRODUCTION

Globally, in 2016 it is estimated that the number of undernourished individuals has increased to 815 million, up from 777 million in 2015 [1]. The world health agency, the World Health Organization (WHO) estimates that 54% of child deaths are caused by poor nutrition [2]. The problem of child nutrition in Indonesia is also quite worrying. The nutritional status survey shows data that 8% of children are overweight, 10.2% are thin and 30.8% suffer from stunting [3] & [4]. Reported by Kompas.com [5], the United Nations Children's Fund (UNICEF) said around 2 million Indonesian children suffer from malnutrition. The high nutritional problems have an impact on children under five who are a vulnerable group [6], [7], [8], (Nuzula, et al., 2017), [10], (Abidin, et. al., 2018) [12] & [13].

Nutritional problems in toddlers are complex health problems and have an impact on further growth and development [10], [14], & [15]. References [16] and [17] shows that nutritional problems have a negative impact on children's physical growth which can cause disability and cause mental failure. Toddlers who are

malnourished will also have intelligence problems [10], [18], dan [17]. In addition, nutritional problems result in a weak child's immune system (Nuzula, et al., 2017), [14], [16] dan [19]. If these impacts are not handled properly, there will be a risk of illness and even death (Rosdiana, dkk., 2020), [14], [16], [17] dan [20].

Given this, it is very important to know in advance the causes of these nutritional problems, so that they can provide appropriate treatment and prevention for children, in order to improve their nutritional status. There are many factors that cause nutritional problems, most of which are related to poor food intake and infectious diseases, especially in poor populations. Furthermore, it is related to people's standard of living, environmental conditions and whether they are able to meet their basic needs such as food, shelter and health services. Therefore, this article aims to describe and analyze it based on research results that have been proven to be true.

2. RESEARCH METHODS

In order to obtain an overview of the factors that cause malnutrition in early childhood, the authors use a literature review. Literature review is the essence of articles and books by describing information in the form of theory and facts based on the topic of discussion [21]. According to Zed in (Maulana, et al., 2020), there are primary characteristics that must be considered in literature review research, namely: 1) research data in the form of written texts, not obtained directly from the field; 2) the data is ready to be used because the researcher does not go directly to the field, but uses the literature in the library; 3) the data used are secondary sources, not primary sources directly obtained from the field; and 4) unlimited data sources, both space and time. Based on this, the stages of data collection in this article are in the form of searching, reading and recording as well as identifying factors that cause malnutrition in children based on relevant and proven to be true.

3. DISCUSSION

The author uses the theoretical framework from UNICEF related to the causes of nutritional problems which are often used as literature on nutrition problems (Black, et. al., 2013), (Smith, et al., 2000), dan [25] and food security (Carletto, et al., 2013) and [24]. This theoretical concept highlights nutritional problems with their causes in all sectors of life, namely social, economic, educational, technological and the wider environment (Pratama, et al., 2019), starting from the community/community level, household/family to individual [28]. The causes of nutritional problems are divided into basic causes, underlying causes and immediate causes.

The basic causes describe the economic, social, environmental and cultural context as well as education and technology, which are mainly at the regional, national and international levels [27] and [28]. Furthermore, the underlying causes, which are generally at the family level [27], are divided into three, namely 1) adequate access to food, including the availability of food production, both individually and in groups and sufficient costs to obtain the food [29] and [30]; 2) adequate care, namely parenting patterns [27]; and 3) health services and a healthy environment, including access to health facilities, such as hospitals [31], clean water and access to sanitation/waste disposal [25], [27] and [31]. The last is direct causes which include food intake and health or disease status [27] and [28]. Based on this explanation, the basic cause is the root cause of other causes, such as a building foundation, if it is not sturdy, it has the potential to collapse the building. The

following causes of nutritional problems from relevant scientific sources:

3.1. Parental Education

The education possessed by the individual shows the level of thinking ability in solving problems. The higher the education, it is expected to be able to provide the best solution with a logical rationale or reason. References [10], [13] and (Mugianti, dkk., 2018) shows that there is an influence between parental education on children's nutritional status. The research argues that a mother who is highly educated will increase her knowledge, making it easier to understand nutrition for her child. Individuals who have higher education, of course, are not easy to get, it takes a step by step process. The process is in the form of a cycle of changes in attitudes and the ability of individuals to accept new knowledge and combine it with what they already have. So therefore, highly educated individuals certainly have broad knowledge and good thinking skills. In addition, by continuing to education and gaining new insights, individuals will feel more stupid, so they always try to dig up various information that they think is important, including about health and nutrition.

However, in contrast to the three studies above, references [6], [33], and (Lestari et al., 2014) stated that mother's education and child's nutritional status were not related. This is because mothers have low formal education but can obtain information about nutrition through non-formal education, namely from health workers in the form of routinely attending posyandu, health counseling as well as from mass and social media, so that they obtain information related to nutrition that is easy to understand and able to provide nutrition. good for children. Higher education does not guarantee that mothers gain knowledge about nutrition because the quality of formal education is not good or in formal education mothers do not acquire knowledge about nutrition [35].

Based on the description above, parental education can be used as a cause of nutritional problems in children. Not only formal education, even non-formal education and the experience of parents in obtaining information related to nutrition affect the nutritional status of children. Education also affects the quantity and quality of individual knowledge [10], [36], [37] and [38]. The higher the intensity of education, both formal and non-formal, the better the knowledge possessed.

3.2. Parental Knowledge

Previous causes have suggested that an individual's knowledge is influenced by his education. So if the

education is good (formal/non-formal), then the knowledge will be good. Individuals who have quality knowledge balanced with quantity related to health and nutrition, are likely to have a good nutritional status, because they know various kinds of nutritional benefits for themselves. This has been proven by references [6], [10], [39] and [40] which revealed that knowledge about nutrition possessed by parents will affect the health and nutritional status of their families. Parents with good knowledge, especially mothers, will be very concerned about the quality and quantity of nutrition for their children according to their needs. Even when the child has no appetite or does not like the food, the mother will innovate to create interesting food variations so that the child wants to eat. Meanwhile, reference (Lestari et al., 2014) stated parents who have knowledge will realize that if a child's nutritional problem befalls, then there is a high chance of being affected. Therefore, it is better for parents to prevent this by providing good balanced nutrition and regularly participating in health activities.

Based on this explanation, it shows that knowledge alone is not enough to guarantee the nutritional status of children and families, but must be accompanied by the ability to act in reflecting this knowledge. Like the results of reference [20] which states that mother's knowledge does not affect the nutritional status of children because mothers have good knowledge regarding nutrition, but it is not applied in caring for children so that nutritional status will be low.

3.3. Family Income

Income is one of the individual accesses to the availability of food. Generally, the quantity of an individual's income is adjusted to the type of work, while job acquisition is influenced by the level of education. This is inseparable from the socioeconomic status of the individual, where education, employment and income are the keys to a good socioeconomic status [41]. If the socioeconomic status is low, which is the effect of a low level of education and the potential to get an inadequate job so that it has an impact on low income, it will make it difficult to meet good nutrition.

Several studies have stated that there is a relationship between family income and nutritional status in children [13], [20], [39], [40], and (Lestari et al., 2014). Families with low incomes have a greater chance of experiencing nutritional problems in their children because of difficulties in meeting food needs in quality and quantity. This difficulty is due to many other needs that must be met besides food nutrition, one of which is installments of goods (Lestari et al., 2014). In contrast to high-income families, certainly have a greater ability to buy and serve food, both types and quantities

in their daily lives. So that children's nutritional are met and their nutritional status is good.

In contrast to the explanation above, the results of references [6] and (Lestari, 2016) state that family income has no relationship with the nutritional status of children. Although parent's income is low, they have good knowledge or information related to nutrition [6], so parents will be careful with expenses and allocate more income to meet their children's nutritional needs [6], (Lestari, 2016). But still, family needs are not only food and not only children who have needs. Other than nutrition, children also need other things, such as proper clothing and a place to rest to health and education services. Parents also have other expenses, such as installments for household needs and other children's education costs. So, if income is low, it will be very difficult to meet all needs, while this is no less important than food nutrition and must be met as well.

3.4. Parenting

Parenting is a care practice applied by parents regarding how parents give time, attention, affection and education to children, so that they grow and develop and have good personalities. The ability of parents to provide care cannot be separated from the knowledge they have, both through formal and non-formal education. Parents who have good knowledge regarding parenting, certainly will also apply good parenting to their families, including feeding practices. This is evidenced by reference [16] which states that there is an increase in the mother's ability to care for children related to nutrition caused by increased mother's knowledge about feeding parenting patterns, so that the nutritional status of children also increases.

Several studies have proven that parenting applied by parents will affect the nutritional status of children. The results of the research by references [9] and (Lestari, 2016) said that poor parenting has a three times greater chance of experiencing low nutritional status. Families play a very important role in fulfilling children's nutrition, because that is where children first get attention on nutritious food intake. The behavior of parents in providing food intake is one form of parenting. How the mother prepares and arranges food will affect the nutritional status of the child [17]. If the mother provides nutritious food, the child's nutritional status will be good, and vice versa. This is in line with the research of reference (Lestari et al., 2014) who revealed that although parents give children food but it is not in accordance with the needs of both quantity and quality, the child will experience nutritional problems. Therefore, the application of parenting in providing food to children must be balanced with the quality and

quantity of the food, so that children get good nutritional and nutritional status for their growth and development.

3.5. Food Supply

One of the causes that play a direct role in nutritional problems is food intake [2] and (Wong et. al, 2014) Nutritious food intake is needed by children for physical activity to support optimal growth and development as well as a strong immune system. Several studies have concluded that there is a relationship between food intake and children's nutritional status [9], [27], (Lestari, 2016), and (Lestari et al., 2014). Food intake includes energy intake, namely carbohydrates, protein, fat and fiber, consumption and habits of breakfast and snacks and breast milk.

A balanced energy intake is the main source for children to develop. Lack of energy intake will result in stunted child development. However, if the excess energy will also hinder the development of children. The portion of energy intake in the form of carbohydrates, protein, fat, fiber and others must be in accordance with the needs of the child so as not to experience a lack or excess of energy so that the nutritional status of the child becomes good. Several studies have proven that lack of or excess energy intake has a great chance of experiencing poor nutritional status [6], [16], [20], [27], (Mugianti, dkk., 2018), [44] and [45]. Lack of energy intake can cause underweight [16] and stunting in children [27], (Mugianti, dkk., 2018), (Lestari et al., 2014), and [45]. Meanwhile, excess energy if it is not balanced with energy expenditure will result in obesity [44]. Energy intake can be obtained from various types of food, such as breakfast and snacks.

One of the food intakes that affect the nutritional status of children is snacks [6], [46] and [47]. There are results of research that show that there is a relationship between snacking habits and nutritional status [47], [48], [49]. Several studies have shown that excessive snack consumption can lead to a greater risk of obesity [44], [47], [48], [50], and [51]. The results of the research by reference [49] stated that snack consumption habits in children were high at 78.4%. Meanwhile, reference [6] shows that 96% of children are accustomed to consuming snacks and only 17.5% of children have good food consumption patterns, the rest consume less good food. Children usually prefer snacks that contain lots of sugar and fat as well as preservatives and food coloring, such as meatball noodles, fried foods and sweet foods. This snacking habit is a wrong nutritional behavior because its nutritional health is not guaranteed [6], [46], [47]. The Food and Drug Supervisory Agency (BPOM) shows that the percentage of school children's snacks that meet the requirements reaches 76.18%, which is still

below the standard of 90% (Kementerian Kesehatan, 2014).

In addition to the consumption of snacks, breakfast is also a contributor to children's food intake. Breakfast is one of the contributors to nutritional intake that affects the nutritional status of children [49]. In addition to having an impact on nutritional status, breakfast habits also affect learning concentration [6], [49] and children's cognitive skills [53]. In addition, several results state that the habit of skipping breakfast will affect snacking behavior [47], [48], and [51]. Generally, children who do not have breakfast will lack energy to start activities in the morning and starve before lunch time, so children will buy snacks to increase their energy, especially if children do not bring lunch box. The Indonesian Ministry of Health [47], [50] shows data that only 5% of children at school bring lunch, so children tend to buy snacks. Therefore, the role of parents is very important in providing children with healthier food at home and as lunch box so as to minimize snack consumption at school [47].

Next, how about breastfeeding? The results of research by reference (Lestari, 2016) states that children who are not exclusively breastfed have greater opportunities malnourished. References [32] and (Lestari et al., 2014) revealed that children with non-exclusive breastfeeding likely to have stunted larger than in children with exclusive breastfeeding. Exclusive breast milk is breastfeeding for six months from the time the baby is born without consuming other foods or MP-ASI (complementary food for breast milk) and medicine except on a doctor's prescription [53]. Breast milk is a source of energy and immune booster that can improve children's nutritional status [53]. Breastfeeding behavior is the influence of mother's education [41]. This is evidenced by reference (Mugianti, dkk., 2018) that the low education of mothers causes a lack of knowledge about the benefits of breast milk so that babies are not exclusively breastfed.

Based on the explanation above, exclusive breastfeeding, breakfast to snacks have diverse energy intake. It is very important the role of parents in providing nutritionally balanced and appropriate food intake for children. Deficiency or excess intake of energy will cause the child has poor nutritional status, so that growth and development is inhibited. In addition, the intake of foods that are not nutritious or hygienically will cause the child susceptible to disease and, if more severe will lead to death.

3.6. Infectious Disease

Infectious disease is one of the causes of poor nutritional status in addition to food intake. Appetite will decrease when individuals are affected by disease so that they lack energy and nutrients even though good nutrition is needed for disease recovery. Infectious diseases that many toddlers suffer from are diarrhea and ARI (Acute Respiratory Infection) (Lestari, et al., 2014), [54]. Several studies have stated that children with diarrhea and ARI have a greater chance of experiencing poor nutritional status [17], [20], (Mugianti, dkk., 2018), (Lestari, et al., 2014). This is due to inadequate access to clean water and sanitation [17] and the condition of the house that is close to the farm cage [20]. Other than that, food intake is also a cause of infectious diseases, where children need good nutrition as a source of energy and strong immunity, if not fulfilled, they will be susceptible to disease [20], [33]. All of these things make bacteria and viruses more easily and quickly transmitted.

In contrast to some of the studies above, reference (Lestari, 2016) revealed that infectious diseases and nutritional status in children had no relationship. According to her, the family has made preventive efforts from an early age against poor nutritional status by providing exclusive breast milk. As explained in the previous topic, exclusive breast milk has various sources of good nutrition for growth and development, so that children have strong immune systems and are difficult to get infected with diseases. This shows that food intake and disease have a reciprocal relationship, namely food intake is needed so that children are not easily infected with disease, but when the child is infected it will cause a decrease in appetite even though energy intake is needed for recovery. As a result, the growth and development of children stunted and will decrease the nutritional status because it does not get sufficient energy intake.

4. CONCLUSION

Considering the high percentage of nutritional problems, prompt and appropriate handling and analysis of the causes are needed, so that prevention and improvement of the impacts can be carried out. The causes of nutritional problems that have been described above are related to each other. Starting from the global crisis involving political, social, economic and environmental. Furthermore, it will affect the social and economic status of people who are in small groups, including households. Due to the global impact, parents, both father and mother will find it difficult to access education, work opportunities, poverty and food availability. This will affect the health of children, where

children do not get nutritious and balanced energy intake which will inhibit growth and development and reduce body resistance. Finally, children are easily and quickly infected with diseases and invite various nutritional problems.

Therefore, it is expected that parents have planned and prepared their abilities since before marriage in order to prevent nutritional problems for themselves and their children later. Starting from attending formal and non-formal education, not to be lazy to dig up various information and train them thinking and skills. Maintain personal hygiene and health in order to avoid infectious diseases that affect internal organs, especially reproductive organs, especially for prospective mothers. So that the process of pregnancy and childbirth goes well and produces nutritious breast milk for children.

REFERENCES

- [1] I. F. for A. D. & W. F. P. (FAO, IFAD & WFP) Food and Agriculture Organization, "The State of Food Insecurity In the World, Meeting the 2015 International Hunger Targets: Taking Stock of Uneven Progress. Rome: Food and Agriculture Organization", 2015.
- [2] UNICEF, "UNICEF's Approach To Scaling Up Nutrition", 2012.
- [3] Kementerian Kesehatan, "Riset Kesehatan Dasar", 2018.
- [4] Badan Ketahanan Pangan & Dewan Ketahanan Pangan, "Konsep Kebijakan Strategis Ketahanan Pangan & Gizi. Jakarta: Badan Ketahanan Pangan Kementerian Pertanian dan Sekretariat Dewan Ketahanan Pangan", 2019.
- [5] E. Pranita, "Masalah Gizi di Indonesia Mengkhawatirkan, Bagaimana Kondisi Selama Pandemi Virus Corona?", *Kompas.com*, 2020.
- [6] Bertalina, "Faktor-Faktor yang Berhubungan dengan Status Gizi Anak Usia Sekolah (6-12 Tahun)", *J. Ilm. Keperawatan Sai Betik*, vol 9, no 1, bll 5-12, 2013.
- [7] T. B. Purwantini, "Pendekatan Rawan Pangan dan Gizi: Besaran, Karakteristik, dan Penyebabnya", *Forum Penelit. Agro Ekon.*, vol 32, no 1, bll 1-17, 2014.
- [8] A. C. Adi en D. R. Andrias, "Balita pada Rumahatangga Miskin di Kabupaten Prioritas Kerawanan Pangan di Indonesia Lebih Rentan Mengalami Gangguan Gizi", in *Child Poverty and Social Protection Conference*, 2016, bll 1-22.

- [9] F. Nuzula, M. N. Oktaviana, en R. S. Anggari, "Analisis terhadap Faktor-Faktor Penyebab Gizi Kurang pada Balita di Desa Banyuanyar Kecamatan Kalibaru Banyuwangi", *J. Ilm. Kesehat. Rustida*, vol 3, no 2, bll 359–364, 2017.
- [10] L. Suryani, "Faktor yang Mempengaruhi Status Gizi Balita di Wilayah Kerja Puskesmas Payung Sekaki Pekanbaru", *J. Midwifery Sci.*, vol 1, no 2, bll 47–53, 2017.
- [11] Abidin en dkk., "Faktor Risiko Wasting dalam Penerapan Full Day School pada Anak di PAUD Pesantren Ummusabri Kendari", *J. Penelit. Kesehat. Suara Forikes*, vol 9, no 4, bll 263–268, 2018.
- [12] J. Ilmiati en R. I. Lestari, "Pengendalian Kualitas Kesehatan dalam Upaya Penanggulangan Gizi Buruk pada Balita: Literatur Review", *J. Kebidanan dan Keperawatan*, vol 11, no 1, bll 272–280, 2020.
- [13] Rosdiana en dkk., "Faktor yang Berhubungan dengan Status Gizi Anak Balita di Wilayah Kerja Puskesmas Kassi Kassi Kota Makassar", *J. Kesehat. Masy.*, vol 10, no 1, bll 33–37, 2020.
- [14] M. Septikasari, *Status Gizi Anak dan Faktor yang Mempengaruhi*. Yogyakarta: UNY Press, 2018.
- [15] Risnah en dkk., "Pengaruh Pelatihan terhadap Pengetahuan tentang Gizi Buruk dan Inter-Professional Collaboration Petugas Puskesmas", *J. Kesehat.*, vol 11, no 1, bll 61–71, 2018.
- [16] F. K. Rahim, "Faktor Resiko Underweight Balita Umur 7-59 Bulan", *J. Keshatan Masy.*, vol 9, no 2, bll 115–121, 2014.
- [17] R. Handayani, "Faktor-Faktor yang Berhubungan dengan Status Gizi pada Anak Balita", *J. Endur.*, vol 2, no 2, bll 217–224, 2017.
- [18] M. Septikasari, M. Akhyar, en B. Wiboworini, "Effect of Gestational Biological, Social, Economic Factors on Undernutrition in Infants 6-12 Month in Cilacap", *Indones. J. Med.*, vol 1, no 3, bll 184–194, 2016.
- [19] M. Adriani en B. Wirjatmadi, *Peranan Gizi dalam Siklus Kehidupan*. Jakarta: Kencana Prenada Media Grup, 2012.
- [20] R. Helmi, "Faktor-Faktor yang Berhubungan dengan Status Gizi pada Balita di Wilayah Kerja Puskesmas Margoroto Kecamatan Metro Kibang Kabupaten Lampung Timur", *J. Kesehat.*, vol 4, no 1, bll 233–242, 2013.
- [21] J. W. Creswell, *Qualitatif Inquiry and Research Design*. California: Sage Publications, Inc, 1998.
- [22] R. A. Maulana, E. Kurniati, en H. Yulindrasari, "Apa yang Menyebabkan Rendahnya Keberadaan Guru Laki-Laki di PAUD?", *J. Ilm. Visi*, vol 5, no 1, bll 23–32, 2020.
- [23] R. E. Black en et. al., "Maternal and Child Undernutrition and Overweight in Low-Income and Middleincome Countries", *Lancet*, vol 382, bll 427–451, 2013.
- [24] L. C. Smith, A. E. E. Obeid, en H. H. Jensen, "Reducing Child Undernutrition: Past Drivers and Priorities for the Post-MDG Era", *Agric Econ*, vol 22, bll 199–215, 2000.
- [25] L. C. Smith en L. Haddad, "Reducing Child Undernutrition: Past Drivers and Priorities for the Post-MDG Era", *World Dev*, vol 68, bll 180–204, 2015.
- [26] C. Carletto, A. Zezza, en R. Banerjee, "Towards Better Measurement of Household Food Security: Harmonizing Indicators and the Role of Household Surveys", *Glob. Food Sec.*, vol 2, bll 30–40, 2013.
- [27] B. Pratama, D. I. Angraini, en K. Nisa, "Penyebab Langsung (Immediate Cause) yang Mempengaruhi Kejadian Stunting pada Anak", *J. Ilm. Kesehat. Sandi Husada*, vol 8, no 2, bll 299–303, 2019.
- [28] D. Bühler, R. Hartje, en U. Grote, "Matching Food Security and Malnutrition Indicators: Evidence from Southeast Asia", *Agric. Econ.*, vol 49, no 4, bll 481–495, 2018.
- [29] S. Di Falco, M. Veronesi, en M. Yesuf, "Does Adaptation to Climate Change Provide Food Security? A Micro-Perspective from Ethiopia", *Am. J. Agr. Econ*, vol 93, no 3, bll 829–846, 2011.
- [30] A. A. Lema, L. K. Munishi, en P. A. Ndakidemi, "Assessing Vulnerability of Food Availability to Climate Change In Hai District, Kilimanjaro Region, Tanzania", *Am. J. Clim. Chang.*, vol 3, no 3, bll 261–271, 2014.
- [31] D. Headey, "Developmental Drivers of Nutritional Change: a Cross-Country Analysis", *World Dev*, vol 42, bll 76–88, 2013.
- [32] S. Mugianti en dkk., "Faktor Penyebab Anak Stunting Usia 25-60 Bulan di Kecamatan

- Sukorejo Kota Blitar”, *J. Ners dan Kebidanan*, vol 5, no 3, bl 268–278, 2018.
- [33] S. Mentari en A. Hermansyah, “Faktor-Faktor yang Berhubungan dengan Status Stunting Anak Usia 24-59 Bulan di Wilayah Kerja UPK Puskesmas Siantan Hulu”, *Pontianak Nutr. J.*, vol 1, no 1, bl 1–5, 2018.
- [34] W. Lestari, A. Margawati, en Z. Rahfiludin, “Faktor Risiko Stunting pada Anak Umur 6-24 Bulan di Kecamatan Penanggalan Kota Subulussalam Provinsi Aceh”, *J. Gizi Indones.*, vol 3, no 1, bl 37–45, 2014.
- [35] R. Charmarbaglawa en E. Al., “The Determination of Child Health and Nutrition: A Meta Analysis. Departemen of Economic”, *University of Maryland and Operation Evaluation Departement, World Bank*. 2010.
- [36] M. De Assis en E. Al., “Obesity, Overweight and In Schoolchildren of the City of Florianopolis, Southern Brazil”, *Eur. J. Clin. Nutr.*, vol 59, no 9, bl 1015–1021, 2005.
- [37] M. S. G. Sarma, D. Wijesinghe, en T. Sivananthawerl, “The Effects of Nutritional Status on Educational Performance of Primary School Children in the Plantation Sector in Nuwara Eliya Educational Zone”, *Trop. Agric. Res.*, vol 24, no 3, bl 203–214, 2013.
- [38] N. Endris, H. Asefa, en L. Dube, “Prevalence of Malnutrition and Associated Factors Among Children in Rural Ethiopia”, *Biomed Res. Int.*, bl 1–6, 2017.
- [39] W. Mustika en D. Syamsul, “Analisis Permasalahan Status Gizi Kurang pada Balita di Puskesmas Teupah Selatan Kabupaten Simeuleu”, *J. Kesehat. Glob.*, vol 1, no 3, bl 127–136, 2018.
- [40] E. Wulanta, M. D. Amisi, en M. I. Punuh, “Hubungan antara Status Sosial Ekonomi dengan Status Gizi pada Anak Usia 24-59 Bulan di Desa Kima Bajo Kecamatan Wori Kabupaten Minahasa Utara”, *Kemas*, vol 8, no 5, bl 34–41, 2019.
- [41] S. Notoatmodjo, *Promosi Kesehatan: Teori dan Aplikasi*. Jakarta: PT Rineka Cipta, 2005.
- [42] N. D. Lestari, “Analisis Determinan Gizi Kurang pada Balita di Kulon Progo, Yogyakarta”, *Indones. J. Nurs. Pract.*, vol 1, no 1, bl 15–21, 2016.
- [43] Wong en et. al, “Risk Factors of Malnutrition Among Preschool Children in Terengganu, Malaysia: A Case Control Study”, *BMC Public Heal. J.*, vol 14, bl 785, 2014.
- [44] A. H. Al Rahmad, “Asupan Serat dan Makanan Jajanan Sebagai Faktor Resiko Obesitas pada Anak di Kota Banda Aceh”, *Maj. Kesehat. Masy. Aceh*, vol 1, no 2, bl 1–8, 2018.
- [45] R. A. Damayanti, L. Muniroh, en Farapti, “Perbedaan Tingkat Kecukupan Zat Gizi dan Riwayat Pemberian ASI Eksklusif pada Balita Stunting dan Non Stunting”, *Media Gizi Indones.*, vol 11, no 1, 2016.
- [46] D. O. Anggiruling, I. Ekayanti, en A. Khomsan, “Analisis Faktor Pemilihan Jajanan, Kontribusi Gizi dan Status Gizi Siswa Sekolah Dasar”, *MKMI*, vol 15, no 1, bl 81–90, 2019.
- [47] A. U. Zogara, “Kebiasaan Jajan dan Status Gizi pada Siswa Sekolah Dasar di Kota Kupang”, *J. Food Nutr. Res.*, vol 1, no 2, bl 15–18, 2020.
- [48] Y. Y. Mariza en A. C. Kusumastuti, “Hubungan antara Kebiasaan Sarapan dan Kebiasaan Jajan dengan Status Gizi Anak Sekolah Dasar di Kecamatan Pedurungan Kota Semarang”, Universitas Diponegoro, 2012.
- [49] Nuryani en Rahmawati, “Kebiasaan Jajan Berhubungan dengan Status Gizi Siswa Anak Sekolah di Kabupaten Gorontalo”, *J. Gizi Indones.*, vol 6, no 2, bl 114–122, 2018.
- [50] B. A. Aprillia, *Faktor yang Berhubungan dengan Pemilihan Makanan Jajanan pada Anak Sekolah Dasar*. Semarang: Universitas Diponegoro, 2011.
- [51] D. Briawan, *Gizi pada Anak Usia Sekolah, dalam Hardinsyah dan Supariasa IDN. Ilmu Gizi Teori dan Aplikasi*. Jakarta: EGC, 2017.
- [52] Kementrian Kesehatan, “Profil Kesehatan Indonesia Tahun 2014”, *Kementrian Kesehatan RI*, 2014. .
- [53] Menteri Kesehatan, *Peraturan Menteri Kesehatan No. 75 Tahun 2014 tentang Pusat Kesehatan Masyarakat*. 2014.
- [54] P. Anisa, “Faktor-Faktor Yang Berhubungan Dengan Kejadian Stunting Pada Balita Usia 25-60 Bulan Di Kelurahan Kalibaru Depok Tahun 2012”, FKM UI, 2012.