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Analysis of Food Diversity Consumption in Stunting Toddlers

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AB STRAC T

Background: Stunting is a child malnutrition that occurs in several countries with a height value compared to the age of -2 SD. Stunting is often considered a common thing in society. This growth disorder starts from pregnancy until the child is 5 years old. Micro and macronutrient deficiency in infants is a problem that is often experienced in Indonesia. The purpose of this study was to determine the description of the consumption of food diversity in stunting toddlers.

Methods: The research method used in this study is descriptive with a cross sectional approach. The population is stunting toddlers in Bangkok village with 25 toddlers. The sampling technique is total sampling. The research variable is the consumption of food diversity in stunting toddlers. Data obtained from interviews and filling out the IDDS questionnaire. The results were processed by means of univariate analysis of each food consumption variation of stunting toddlers.

Results: The results showed. toddlers consume about 84% of cereals/tubers, 60% of eggs and 60% of fats and oils. In conclusion, 56% of stunting toddlers consumed a variety of foods based on the results of interviews and IDDS filling.

Conclusions: This study shows that stunting toddlers in Bangkok village need to increase the diversity of food types. Socialization to parents needs to be improved and supervision of children's growth and development also needs to be improved by health workers

Conclusions: This research shows that stunted toddlers in Bangkok Village need to increase the diversity of food types. The socialization of parents needs to be improved and monitoring of children's growth and development also needs to be improved by health workers

I. INTRODUCTION

Stunting remains a major problem in the world. Although the incidence is decreasing, the affected children are increasing. The impact of stunting is mortality, morbidity and other impacts such as child cognitive. Stunting is also one of the descriptions of the welfare status of a country, with the number of stunting cases reflecting that the poverty rate in the country is also increasing [1]. The incidence of stunting in Indonesia from 2013 was 37.2%, this number continues to increase from 2010 (35.6%) and 2007 (36.8%) [2]. The process of introducing several types of food to toddlers needs to be done early, because each type of food has a different nutritional value[3].

The type of food given to toddlers is one of the determinants of stunting. Children in the first 2 years require very complex nutrition because complementary feeding begins after 6 months of birth [4]. In East Java Province, the prevalence of stunting under five is 26.7% of the total population of children under five in East Java Province[5]. To support the growth and development of toddlers, choosing the type of food is very important to meet the nutritional needs. In general, there are 6 nutrients needed by the body, namely carbohydrates, fats, proteins, vitamins, minerals such as iron (Fe) and zinc (Zn)[6].

Diverse food consumption habits among toddlers in Indonesia are still a problem. Food diversity is seen from 4 or more types of food eaten from 7 types of food groups [5]. In Indonesia, most of the feeding for toddlers is dominated by the type of food sourced from carbohydrates and the lack of intake of animal protein, fruit and vegetables [7]. Several studies have shown that low dietary diversity is associated with an increased risk of stunting and other nutritional problems such as overweight, dyslipidemia, metabolic syndrome [8].

Research related to the diversity of food consumption in stunting toddlers in Bangkok Village, Gurah District, Kediri Regency. Based on this, the purpose of this study is to find out the description of the food diversity consumption of stunting toddlers.

II. METHOD

The research method used in this study is descriptive with a cross sectional approach. The population is stunting toddlers in Bangkok village with 25 toddlers. The sampling technique is total sampling. The research variable is the diversity of food consumption in stunting toddlers. The data used are primary data obtained from interviews and filling out the IDDS questionnaire. Food diversity is measured using the recall method, after which the data is entered in the IDDS (Individual Dietary Diversity Score) questionnaire consisting of 9 food groups. If the score is 0-5 then the food is categorized as not diverse, but if the score is more than 5 then it is called diverse. univariate analysis method for each food variety of stunting toddlers [9]

III. RESULTS AND DISCUSSION

Table 1. Characteristics of Respondents

No	Characteristics of Respondents Based on	Amount	Percentage
1.	Mother's Age		
	a. < 20 years	1	4
	b. 21 - 35 Years	14	56
	c. > 36 Years	10	40
2.	Mother's Education		
	a. No School - Elementary school/ equivalent	2	8
	b. Middle school/equivalent	9	36
	c. High school / equivalent - College	14	56
3.	Child Gender		
	a. Man	11	44
	b. Woman	14	56
4.	Birth Weight		
	a. Low Risk (2500 grams - 4000 grams)	19	76
	b. High Risk (< 2500 grams / > 4000 grams	6	24

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Based on the data above, it was found that the mother's age was at the most moderate risk, namely the age of 21-35 years around 56%, the mother's education was at most higher education 56%, namely high school / equivalent -college. Data Most children are female, namely 56% and the child's birth weight is the most low risk 76%, which is around 2500 grams to 4000 grams.

Table 2. Consumption of Food Diversity for Stunting Toddlers

Consumption Pattern Based on IDDS	**Types of Diversity of Food Consumption of Stunting Toddlers**																	
	Cereals and Tubers		Animal Meat		Processed Milk		Egg		Nuts		Foods Rich in Vitamin A from Fruits and Vegetables		Fruit		Vegetables		Fats and Oils	
	n	**%**	n	**%**	n	**%**	n	%	n	%	n	%	n	%	n	%	n	%
Consuming	21	84	8	32	12	48	15	60	5	20	10	40	1	4	11	44	15	60
Not Consuming	4	16	17	68	13	52	10	40	20	80	15	60	24	96	14	56	10	40
TOTAL	25	100	25	100	25	100	25	100	25	100	25	100	25	100	25	100	25	100

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From the above, it was found that toddlers consumed cereals/tubers around 84%, egg foods and 60% fats or oils.

Table 3. Consumption of Food Diversity by IDDS in Stunting Toddlers

Diversity of Food Consumption According to IDDS in Stunting Toddlers	Amount	Percentage
Not Diverse	14	56
Diverse	11	44
Total	25	100

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Based on the data above, it was found that Toddlers did not consume various kinds of food, the calculation results were around 56%.

IV. DISCUSSION

In this study, the education of mothers of children under five was mostly high school / equivalent, the higher the level of mother's education would affect the mother's work. The higher the education of the mother, the easier it will be for the mother to get a job [10]. The high educational status and occupation of the mother have an impact on the mother's upbringing. Mothers who are busy with work will entrust their children to caregivers. Caregivers can be from their own families such as parents or grandmothers of toddlers or other people who are paid to care for toddlers. This is supported by research from Nabuasa, in 2013 entitled the relationship between parenting and stunting in toddlers aged 24 - 59 months. Toddlers who have a history of poor parenting have a 14.5 times chance of experiencing stunting when compared to toddlers who have a history of good parenting [11]. Research conducted in Aceh also stated that one of the risk factors for stunting, namely parenting, poor parenting has an 8 times greater chance of influencing stunting [12]. One of the good parenting styles can be seen from the provision of food to toddlers. Toddlers need to grow and develop, for that they need adequate nutritional intake.

Consuming a variety of foods will have a good impact on the growth and development of children. Diversity of food consumption is the variety of food groups consisting of staple foods, side dishes, vegetables and fruits and water as well as diversity in each food group. Diverse food is an important requirement to produce a balanced nutritional quality food pattern.This is in accordance with research conducted by Widyaningsih, 2018 which states that toddlers with diverse food intakes have a 3,213 times risk of experiencing stunting when compared to toddlers who have diverse food intakes [7].

Fulfillment of complete nutrition for toddlers is a determining factor for optimal growth and development processes. Malnutrition under the age of 2 years will affect the brain development of toddlers [10]. The need for micronutrients is the need for nutrients that play an important role in the growth of toddlers. The education and knowledge of parents [13] or a caregiver for toddlers greatly influences the pattern of feeding parenting. Toddlers with less access to food consumption can be seen from the quality and quantity of the incomplete daily menu composition. In line with this, food insecurity, menu compositions that are not nutritious, unbalanced and do not vary both in quality and quantity can cause growth delays and malnutrition in toddlers [3]. Malnutrition for a long time if not immediately addressed until the age of two years will cause stunting conditions that persist into adulthood. Malnutrition in stunting toddlers will have an impact on the intelligence and psychology of toddlers [14].

V. CONCLUSION

Diversity of food consumption in stunted toddlers showed that 56% or most of the toddlers did not consume various kinds of food. Most of these toddlers consumed cereals/tubers, eggs and also types of fat/lots of oil. Socialization about the introduction and provision of types of food can be started from the age of 6 months.

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JOINT INTERNATIONAL CONFERENCE AGENDA

17-18th November 2021

DAY	ACTIVITY	RESPONSIBLE EVENT
17th November 2021	Opening Ceremony	Wim Banu Ukhrowi, S.S., M.Pd
	National Anthem of Indonesia	Operator
	Welcoming dance	Operator
	Welcome speech and report by Chairman	H. Andi Yudianto, S.Kep., M.Kes
	Welcome speech by Dean of FIK Unipdu	Pujiani, S.Kep., Ns., M.Kes
	Welcome speech and opening ceremony by Rector Unipdu	Prof. DR. H. Ahmad Zahro, MA
	Speech by Head of Yayasan Pesantren Tinggi Darul Ulum	Drs. KH. Zaimudin Wijaya As'ad, MS
	Pray (Doa)	Dr. dr. H. M. Zulfikar As'ad, MMR
	Photo Session (via zoom)	Operator
	Education Policy of Indonesia During and After Covid-19 Pandemic in Health Schools	Dr. H. Emil Elestianto Dardak, B.Bus., M.Sc
	1st Main Session "Thailand challenges and strategies after covid-19 pandemic in the health school system"	Assistant Professor Dr. SupapakPhetrasuwan Mahidol University of Thailand
	2nd Main Session "Immune resilient during and after covid-19 pandemic in Taiwan"	Prof. Chiou-Feng Lin, Ph.D Taipei Medical University, Taiwan
	3rd Main Session "Strategies to improve family and community resilience in the face of the covid-19 pandemic"	Dr. Ns. Moch. Maftuchul Huda, M. Kep. Sp.Kom KaryaHusada, Indonesia
	4th Main Session "Immune response after covid-19 vaccination"	Dyah Ika Krisnawati, S.Kep, Ns, M.Si, Ph.D Dharma Husada Nursing Academy, Kediri, East Java, Indonesia
	5th Main Session "Education in Public Health During the Covid-19 Pandemic"	Dr. Kaeleen Dingle, PhD, MPH (TropHlth) BEduc RN Queensland University of Technology (QUT), Brisbane, Australia
	6th Main Session "Maternal Health: Past, Present and Moving forward"	DrJerico F Pardosi, PhD Queensland University of Technology (QUT), Brisbane, Australia

DAY	ACTIVITY	RESPONSIBLE EVENT
18th November 2021	7th Main Session "In this world you will have trouble: developing resilience in nursing students for a post-Covid world"	Dr. Barbara Richardson, DNP, RN, ARNP, FNP-C Lee University America
	8th Main Session "Overcoming compassion fatigue"	Dr. Michelle White, DNP, RN, APRN, FNP-BC Lee University America
	9th Main Session "Living side to side with Covid-19"	Putu Indraswari Aryanti, S.Kep. Ns., M.Kep Stikes RS Baptis, Indonesia
	10th Main Session "Social mental health after pandemic covid-19"	Dr. Byba Melda Suhita, S.Kep. Ns., M.Kes Dean of Nursing and Midwifery program of IIK Strada, Indonesia
	11th Main Session "Spirituality and quality of life after the covid-19 pandemic"	Dr. Masruroh. S.Kep., Ns., M.Kes Nursing Lecturer of University of Pesantren TinggiDarulUlum, Indonesia
	Parallel session Public Health 1: OP_01	Riza Yuliawati, SKM, MIPH
	Public Health 2: OP_02	Mika Vernicia K, SKM. MPH
	Fundamenal and Management: OP_03	Selvia David Richard, S.Kep., Ns., M.Kep
	Medical Surgical: OP_04	Sahari, SKM
	Mental Health: OP_05	Desi Natalia Tryjianti I, S.Kep., Ns., M.Kep
	Nutrition & Herbal: OP_06	Srinalesti Mahanani, S.Kep., Ns., M.Kep
	Maternity1: OP_07	Zakiah, S.Keb., Bd., M.Keb
	Maternity2: OP_08	Sri Banun Titi Istiqomah, SST. M.Kes
	Pediatric: OP_09	Angga Miftakhul Nizar, S.Kep., Ns., M.Kep