

Literature Review : Feeding Comfort With Stunting Problems in Toddlers

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Abstract: The poor practice of complementary feeding (MPASI) is one of the most common problems in developing countries. This can lead to poor absorption of nutrients, especially protein, which is associated with problems related to physical growth disorders such as stunting in children under the age of 5 years. This study used a cross-sectional design intending to clarify the relationship between complementary feeding practices and the risk of stunting in children aged 6 to 12 months from Central Lombok. It was an analytical observational study. A total of 206 children with an average age of 9.3 months were selected as the subjects of this study using cluster sampling. Most of them are women. This study analyzed four parameters of the practice of giving complementary foods, namely the age of the first time complementary foods, types of complementary foods, the frequency of complementary foods, and the frequency of complementary foods. This study found a significant relationship between the frequency of complementary feeding ($p=0.047$, 95% CI) and the number of complementary foods given ($p = 0.020$, 95% CI) with the risk of developmental disorders in children. On the other hand, other parameters such as age at initiation of complementary foods and solid food texture were not significantly associated with the risk of growth retardation. One of the factors that directly affect stunting in children under the age of 2 years is intake factors such as breast milk (ASI) and breast milk supplements (MPASI).

1 INTRODUCTION

Stunting is often a health problem that needs to be corrected because this condition can make toddlers slower in the process of growing and developing, as well as making toddlers' memory low. Including data from the WHO, in 2016 the prevalence of stunting was 23.8%, in 2017 it was 23.4%, in 2018 it was 22.9%, in 2019 it was 22.4%, and in 2020 it was 22%. Sourced from RISKESDAS, the prevalence of stunting in Indonesia is still high, reaching 27.7% in 2017 and 30.8% in 2018. Although the stunting rate has decreased from year to year, the stunting problem still needs to be addressed.

Stunting is a condition in which toddlers fail to grow and develop. Lack of intake or nutrition makes the brain slow to think. The factors that cause stunting in toddlers are the lack of intake at the age of 3 years, the occurrence of infection in the mother during

pregnancy, the lack of knowledge about nutrition in the mother of toddlers, and the bad influence of the surrounding environment. In this case, the government must seek to immediately address it so that the stunting prevalence rate decreases.

The success of a nation's national development is determined by the availability of qualified, healthy, intelligent, and productive Human Resources (HR). Human resource quality development can be pursued by optimizing the potential for the growth and development of toddlers evenly. If these efforts are carried out effectively and efficiently and can reach all targets that require services. Efforts to develop the quality of human resources by optimizing the potential for growth and development of children can be carried out even if the community-based health service system can be carried out effectively and efficiently.

Nutritional problems are an indicator of increasing human resources. In this case, toddlers are among

the most vulnerable to nutritional problems. The toddler period is a period of very rapid growth and development, this period is termed the golden period and critical period. If a toddler is undernourished, it will result in susceptibility to infectious diseases, failure to grow and develop, and death in toddlers.

Complementary feeding with events stunting has a significant relationship. A study found that there was a relationship between the frequency of complementary feeding ($p = 0.047$, 95% CI), and the number of complementary foods given ($p = 0.020$, 95% CI) with the incidence of stunting. Meanwhile, other extrapolations, namely the age of introduction of complementary food and the texture of the complementary food given did not have a significant relationship with the incidence of stunting.

This study aims to explain the benefits of complementary foods for mothers and toddlers, that complementary foods are complete nutrition for toddlers, increase the body's immune power, and increase mental, emotional, and spiritual intelligence that is stable and mature. And aims to provide an overview of stunting problems in Indonesia and ways or strategies to overcome them, provide information on short-term trends in

Indonesia, and provide information on the effects of stunting in Indonesia, both in the near and long term.

2 METHODS

The method used in this paper is a literature review from various related national journals. A literature review is a description of the findings, theories, and previous research materials obtained from research results to serve as a reference for research activities to order to develop a clear frame of mind from the formulation of the problem to be studied. In the search for articles, the author uses a filter, namely the type of article only on research articles, and published in 2018-2021 using Google Scholar by typing the keywords used in the search are [MP-ASI], and [Stunting]. And obtained as many as 15 journals by the inclusion criteria used, including the age of the sample is infants to toddlers aged 5 years. Finally, the number of articles used in this literature review is 10 article.

3 RESULTS

Analysis of Articles on the Feeding Comfort With Stunting Problems in Toddlers can be seen in table 1

Table 1. Analysis of Articles on the Feeding Comfort With Stunting Problems in Toddlers

No	Writer	Year	Journal Name, Volume, Number	Article Title	Method	Research result	Data Based
1.	Maria Nova, Olivia Afriyanti	2018	Pioneer Health, Volume 5, No. 1	Hubungan berat badan, asi eksklusif, MPASI dan asupan energi dengan stunting pada balita usia 24-59 bulan di Puskesmas Lubuk B uaya	The research design used is Cross Sectional with a quantitative approach	The provision of MP-ASI for infants aged 24–59 months in the Lubuk Buaya Health Center Work Area, Padang City, is located in the good type, with a percentage of 68.1% of 94 toddlers. The results of this study show- 68.1% of children under five in the research location have a history of	Google Scholar

						giving complementary foods in good types	
2.	Lidia Fitri, Ernita	2019	Obstetrics, Volume 8, No. 1	Hubungan pemberian asi eksklusif dan MPASI dini dengan kejadian stunting pada balita	This research uses- kan quantitative analysis with case-control design and retrospective approach	The provision of MPASI to toddlers in the Sidomulyo inpatient puskesmas area, Pekanbaru in 2018 resulted in 14 problem groups for toddlers whose early MPASI was 12 people (80%) under five who were stunted, on the contrary from 16 people who were not given early MPASI there were 13 babies (86, 7%) who do not experience stunting	Google Scholar
3.	Wildan Widiasty, Harleli	2020	<i>Nursing Care And Health Technology</i> , Volume 1, No. 2	Hubungan Pemberian MPASI Terhadap Kejadian Stunting Pada Balita Usia 6 – 24 Bulan di Puskesmas Soropia	The design of this study was analytically observational by using it's a cross-sectional design, right? <i>Study</i>	Research at the Soloria Health Center showed that energy intake in toddlers was stated to be related to the incidence of stunting. Meanwhile, knowledge of maternal nutrition, protein intake, and time to introduce complementary foods are not related with stunting	Google Scholar
4.	Noverian Joshua P, Farid Agung R, Galuh Hardaningsih	2018	Diponegoro Medicine, Volume 7, No. 2	Pemberian makanan pendamping ASI dini sebagai faktor risiko kejadian stunting pada anak usia 2-3 tahun	This study uses analytical observation with a case control design	Rowosari Health Center Semarang sourced from 104 case-control	Google Scholar

subjects in the area, there was a significant association with early complementary feeding ($p=0,000$). No significant bond was found in the MPASI type ($p=0,680$), the consistency of complementary foods ($p=0,290$), parent's income ($p=1,000$)

5.	Dwi Puji K, Hamam Hadi, Astria Flowers P	2016	Indonesian Nutrition and Dietetics, Volume 4, No. 2	Waktu pemberian makanan pendamping ASI (MPASI) berhubungan dengan kejadian stunting anak usia 6-23 bulan di Kecamatan Sedayu	In this research, a cross-sectional study design (ponton latitude) is used descriptive.	Research in Sedayu District showed that early breastfeeding complementary feeding was significantly associated with stunting while energy and protein intake had no relationship with stunting	Google Scholar
6.	Rahmawati, Syaiful Bachri	2019	Health dr. Soebandi, Volume 8, No. 2	Waktu pemberian MPASI dengan status gizi berdasarkan tinggi badan pada balita	This study uses a case-control approach (<i>controls</i>)	Research in Bondowo-so Regency shows that there is a significant relationship between complementary feeding and nutritional status in toddlers aged 2-3 years because they get a correlation coefficient value of 0.310.	Google Scholar
7.	Eva Rosdiana, Febri Yusnanda, Lia Afrita	2020	<i>Journal Of Healthcare Technology And</i>	Pengaruh pendidikan kesehatan terhadap kesesuaian pemberian MPASI	The design of this study uses a quasi-experimental design with one	The research of the Baitus-salam Aceh Besar Health Center on	Google Scholar

			<i>Medicine</i> , Volume 6, No. 2	guna pencegahan stunting pada bayi usia 6-12 bulan di wilayah kerja Puskesmas Baitussalam Aceh besar	group pretest and posttest <i>Design</i>	mothers who have babies aged 6-12 months experienced an increase in the adequacy of complementary feeding from 2.75 to 3.15 with a p-value of 0.031	
8.	Yati Purnama, Neti Sulami	2022	Scientific Journal of Mandala Education, Volume 8, No. 1	Gambaran Pemberian Menu Sehat MPASI Dalam Upaya Pencegahan Stunting di Kabupaten Bima	The design of this study is a descriptive study with a cross-sectional design		Google Scholar
9.	Luluk Damayanti, Jasmine Putri Utami, Reynandar Wilda Muhammad, Umi Rahmawati, Wimpy, Enny Listiawati	2020	Journal of Community Care, Volume 2, No. 4	Pelatihan siapkan asi bunda sadari, pahami dan upgrade kebutuhan MPASI balita	This study uses the method used in this study is the experimental method (experimental)		Google Scholar
10.	Ni Komang Ayu Swanitri Wangiyana, Titi Pambudi Karuniawaty, Ristania Ellya John, Ratu Missa Qurani, Jeslyn Teng kawan, Ayu Anandhika Septisari, Zulfikar Ihyauddin	2020	<i>Journal of Nutrition and Food Research</i> , Volume 43, No.2	Praktik pemberian MPASI terhadap risiko stunting pada anak usia 6-12 bulan di Lombok Tengah	This study is an observational analytic study that uses a cross-sectional design method		Google Scholar

4 DISCUSSIONS

Most studies examine the relationship between events stunting with MPASI and its prevention in toddlers ranging from 6 months to 3 years. However, there is one study that is being discussed in our group, namely the Description of Giving MPASI Healthy Menu in Efforts to Prevent Stunting. The toddler period is a period that is very sensitive to the environment that can affect nutrition and health status in growth and development. One of the nutritional problems experienced by toddlers is early stunting. This condition will cause cognitive

and psychomotor disorders in toddlers as well as a decrease in productivity when they grow up.

The main factors that can influence stunting in toddlers are intake factors, including breast milk (ASI) and complementary foods for breast milk (MPASI). MPASI is food or drink containing nutrients that are given to toddlers aged 6-24 months to meet nutritional needs other than mother's milk. Giving MPASI appropriately will make toddlers receive an adequate intake of nutrients to support the growth and development process.

Data from WHO shows that the energy needs of complementary foods for toddlers with an average

intake of breast milk in developing countries is around 200 kcal/day at the age of 6-8 months, 300 kcal/day at the age of 9-11 months, and 550 kcal/day at the age of 12-23 months.

Since the age of 6 months, nutrition from breast milk alone is not sufficient for energy and substance needs nutrients needed by toddlers, so complementary foods are needed that can complement the needs of these macro and micronutrients. Complementary foods for breastfeeding that are commonly given to toddlers in Indonesia are bananas and rice flour mixed with breast milk (Nurkomala et al, 2017).

WHO Global Strategy for Feeding Infants and Young Children 2003 recommends that the provision of MPASI can meet 4 requirements including: complete nutritious food, timely feeding, adequate and balanced food, safe, and given in the right way. If toddlers are given complementary foods too early (before the age of 6 months) will also increase the risk of diarrhea and other infections.

At the age of 9 years and over, if you have not been introduced to solid foods, the chances of experiencing problems with food increase. Therefore, consistent feeding should be given as children get older. At the age of 6 months, solid food is given in the form of fine porridge. Softer-textured foods can also be introduced before 12 months of age. At this age, toddlers can also be given the same food as other family members eat. (family food). (Helmiyalti, 2020).

The principles of MPASI are as follows:

- a. 6-8 months old
Type: 1 type of base material (6 months), 2 types of base material (7-8 months)
Texture : Semi-liquid (mashed). Gradually the mixture of water is reduced, so that become semi-solid
Frequency : Main meals 2-3 times a day, snacks 1-2 times a day
Portion : 2-3tablespoons, gradually increasing to a small bowl or equivalent to 125 ml
breast milk : Like baby
- b. 9-11 months old
Type : 3-4 types of basic ingredients (serve separately or mixed)
Texture : Foods that are finely chopped or soft, increased until the

ingredients are coarser so that they are easy to grip

- Frequency : Main meals 3-4 times a day, snacks 1-2 times a day
Portion : Small spoon or equivalent to 125 ml
Breast milk : As baby

c. 12-24 months old

- Type : Family meal
Texture : Congested
Frequency : Main meals 3-4 times a day, snacks 1-2 times a day
Portion : Up to 1 small cup or equivalent to 175-250 ml
Breast milk : As baby

Condition stunting can be prevented by paying attention to the quality and quantity of protein consumed by toddlers, while the recommended type of protein comes from animal protein. Because animal protein is considered better, which has a more complete content of essential amino acids when compared to vegetable protein. Animal protein as complementary food can be given to toddlers in the form of meat, eggs, and fish. The provision of protein that is not as recommended can lead to the risk of stunting. Therefore, parents need to provide foods that contain animal protein in excess.

5 CONCLUSIONS

Based on the results of this study, there is a strong relationship between the incidence of stunting and complementary food and its prevention in toddlers ranging from 6 months to 3 years of age. However, there is one study that is being discussed in our group, namely the Description of Giving MPASI Healthy Menu in Efforts to Prevent Stunting. Infancy is a period that is very sensitive to the environment that can affect nutrition and health status on growth and development. One of the nutritional problems experienced by toddlers is early stunting. This condition will cause cognitive and psychomotor disorders in toddlers as well as a decrease in productivity when they grow up. The main factors that affect stunting in toddlers are intake factors, including breast milk (ASI) and complementary foods for breast milk (MP-ASI).

6 REFERENCES

- Damayanti, L., Utami, M.P., Muhammad, R.W., Rahmawati, U., Wimpy, W., Listiawati, E., 2020. Training Preparing Mother's Breastfeeding Realize, Understand and Upgrade Your Child's Mpsi Needs to Posyandu Kader. *JPM* 2, 217–226. <https://doi.org/10.37287/jpm.v2i4.278>
- Khasanah, D.P., Hadi, H., Paramashanti, B.A., 2016. Waktu pemberian makanan pendamping ASI (MP-ASI) berhubungan dengan kejadian stunting anak usia 6-23 bulan di Kecamatan Sedayu. *IJND* 4, 105. [https://doi.org/10.21927/ijnd.2016.4\(2\).105-111](https://doi.org/10.21927/ijnd.2016.4(2).105-111)
- Lidia, F., Ernita, E., 2019. Hubungan pemberian ASI Eksklusif dan MPASI Dini Dengan kejadian stunting Pada Balita. *aim* 8.
- Nova, M., Afriyanti, O., 2018. Hubungan Berat Badan, ASI Eksklusif, MP-ASI Dan Asupan Energi Dengan Stunting Pada Balita Usia 24–59 Bulan Di Puskesmas Lubuk Buaya. *JKP* 5, 39–45. <https://doi.org/10.33653/jkp.v5i1.92>
- Prihutama, N.Y., Rahmadi, F.A., Hardaningsih, G., 2018. Pemberian Makanan Pendamping ASI Dini Sebagai Faktor Risiko Kejadian Stunting Pada Anak Usia 2-3 7.
- Purnama, Y., Sulami, N., 2022. Gambaran Pemberian Menu Sehat Mpsi Dalam Upaya Pencegahan Stunting Di Kabupaten Bima 8.
- Rosdiana, E., Yusnanda, F., Afrita, L., 2020. Pengaruh Pendidikan Kesehatan Terhadap Kesesuaian Pemberian MP-ASI Guna Pencegahan Stunting Pada Bayi Usia 6-12 Bulan Di Wilayah Kerja Puskesmas Baitussalam Aceh Besar. *JHTM* 6, 981. <https://doi.org/10.33143/jhtm.v6i2.1158>
- Syaiful Bachri, 2020. Pengaturan Waktu Pemberian Makanan Tambahan dengan Status Gizi Berdasarkan Tinggi Badan Balita. *jkds* 8, 104–111. <https://doi.org/10.36858/jkds.v8i2.219>
- Wangiyana, N.K.A.S., Karuniawaty, T.P., John, R.E., Qurani, R.M., Teng kawan, J., Septisari, A.A., Ihyauddin, Z., 2021. Praktik Pemberian MP-ASI Terhadap Risiko Stunting Pada Anak Usia 6-12 Bulan Di Lombok Tengah [The Complementary Feeding Practice And Risk Of Stunting Among Children Aged 6-12 Months In Central Lombok]. *Penel Gizi Makan* 43, 81–88. <https://doi.org/10.22435/pgm.v43i2.4118>
- Widiastity, W., Harleli, H., 2021. Hubungan Pemberian MP-ASI Terhadap Kejadian Stunting Pada Balita Usia 6 – 24 Bulan di Puskesmas Soropia. *NCHAT* 1, 81–86. <https://doi.org/10.56742/nchat.v1i2.13>