OVERVIEW OF MOTHER'S KNOWLEDGE ABOUT NUTRITION AND MOTHER'S PARENTING ON THE INCIDENCE OF STUNTING IN KENDAL PECABEAN VILLAGE, WORKING AREA OF CANDI PUBLIC HEALTH CENTER

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Abstract. Stunting is a chronic malnutrition problem that occurs for a long time due to lack of nutritional intake resulting in growth failure in toddlers. The purpose of this study is to identify the picture of mother's knowledge about nutrition and mother's parenting on the incidence of stunting in Kendal Pecabean Village, Working Area of the Candi Public Health Center. This study is descriptive research. The number of samples was 40 stunting toddlers aged 24-59 months with total sampling techniques. Data were analyzed univariately. This study uses cross-tabulation analysis where mother's knowledge about nutrition and mother's parenting on the incidence of stunting has a relationship because if the mother's knowledge and parenting style are good causing toddlers will not experience stunting. The results of this study, most of them had good knowledge as many as 21 respondents due to most of the education of high school mothers so that it was easier to receive information related to stunting. Most have good parenting as many as 25 respondents because most mothers of toddlers do not work so they are able to take good care of their own children and most have the number of children 2 because the family lives family planning programs. Most of the toddlers are stunted as many as 21 toddlers due to lack of nutritional intake that occurs in the long term, causing disruption of growth in children.

Keywords: Stunting, Nutrition Knowledge, Parenting

1 INTRODUCTION

Toddlerhood is an important period where humans begin to experience a growth and development process that can affect brain intelligence and physical endurance which will greatly affect the quality of human resources in the future. However, currently nutritional problems in toddlers are one of the top priority health problems in Indonesia because toddlers are one of the age groups that are prone to disease or infection. Nutritional problems in toddlers that are currently a special concern in Indonesia are malnutrition, where this can make toddlers prone to disease or infection if it occurs in the short term and decreased intelligence and productivity in the future if it occurs in the long term. In addition, chronic malnutrition can also cause toddlers to experience failure in growth and development and stunting.

According to the World Health Organization (WHO), stunting is short or very short based on length/height according to age less than -2 standard deviations (SD) on the WHO growth curve which occurs due to irreversible conditions due to inadequate nutritional intake and recurrent/chronic infections that occur in the first 1000 days of life (HPK) (Susanti, 2023; Prasetyo et al., 2023). While stunting according to the Ministry of Health is a chronic malnutrition problem caused by insufficient nutritional intake for a long time due to feeding that is not in accordance with nutritional needs. Stunting can occur starting from the fetus is still in the womb and only appears when the child is two years old (Agustina, 2022; Abiyu et al., 2020; Adam et al., 2019). Based on the above understanding, it can be concluded that stunting is a chronic malnutrition problem that occurs for a long time due to lack of nutritional intake which results in growth failure in toddlers.

Based on the results of Septamarini's research in the *Journal of Nutrition College* in 2019, it is said that mothers with low nutritional knowledge are at 10.2 times greater risk of stunting children compared to mothers with knowledge of adequate nutrition (Setyawati & Ramadha, 2020; Agedew et al., 2022; Ariati, 2019). Fother actors who cause stunting also occur due to poor parenting. Where this can be improved starting from education for adolescents to prospective mothers about reproductive health, meeting good nutritional needs, educating mothers about Early Breastfeeding Initiation (IMD), breastfeeding up to 6 months in children, and the use of health facilities for child immunization. From the explanation above, the prevalence of stunting can be handled by increasing the factors that cause stunting, including mother’s knowledge about nutrition and good parenting.

WHO estimates that 22% or equivalent to 149.2 million children under five in the world are stunted in 2020. WHO said the problem of stunting is considered chronic if the incidence of stunting in the country is more than 20%. Indonesia it self is among the five countries with the highest incidence rate in the world and is second in the Southeast Asia region with a prevalence of 26.1% in 2020 (Suparyanto & Rosad, 2020).

Based on the results of the Indonesian Toddler Nutrition Status Survey (SSGBI) in 2021, the national stunting rate has decreased by 1.6% per year from 27.7% in 2019 and to 24.4% in 2021 (Rokom, 2021). In 2022, the stunting rate according to SSGBI decreased by 2.8%, from 24.4% in 2021 to 21.6% in 2022 (BPS RI & Kemkes RI, 2021). It is expected that by 2024 it will meet the stunting prevalence target of 14%. In

some regions, stunting prevalence has begun to decline below 20%. This shows that the implementation of government policies in encouraging efforts to accelerate stunting reduction at the national level has produced quite good results (Rokom, 2021; Athavale et al., 2020).

Currently, based on SSGBI data, the target and achievement of stunting prevalence of the East Java Provincial Government (East Java Provincial Government) has continued to decline since 2019. In East Java, in 2019 the prevalence of stunting was recorded at 26.9% to 25.7% in 2020, in 2021 it was recorded to have decreased to 23.5% (Newsroom, 2023; Barone et al., 2021; Black et al., 2020). Then, from the latest survey data in 2022, it was 19.2%, which means a decrease of 4.3% from 2021. Based on data from the Sidoarjo Health Office in 2019, there were 12.1% or equivalent to 9,329 children experiencing stunting (Astuti et al., 2020). In 2021, it decreased to 7.6% or equivalent to 6,379 toddlers in Sidoarjo. In 2022, there are 14.2% of toddlers who are stunted and in 2023 there is an increase to 16.4% of toddlers who are stunted. From 202 data 1, there are 3 regions in Sidoarjo Regency that have the highest stunting incidence rates, including Waru, Candi, and Ganting areas (Sidoarjo Regency Health Office 2022) (Dinkes Kab Sidoarjo, 2020).

Based on the prevalence of stunting in Sidoarjo, Candi is one of the areas with the highest incidence rate. Where from the data in the Candi Public Health Center experienced instability from year to year. In 2019, there were 417 toddlers out of 5,982 stunting toddlers and decreased in 2020 to 209 stunting toddlers. However, in 2021 the incidence of stunting has increased, namely there are 531 toddlers out of 4,609 toddlers whose height is measured to be stunted in 2021 (Dinkes Kab Sidoarjo, 2020).

Based on the prevalence of stunting in the Candi Health Center, Kendal Pecabean village is one of the areas with an unstable stunting incidence rate. Where from the data in the Candi Public Health Center, Kendal Pecabean village experiences instability from year to year. In August 2020, there were 37 stunted toddlers. Then, in February 2021, it increased to 63 stunted toddlers. Then, in the same year in August, it decreased to 32 stunted toddlers. Then, it increased again in 2022 in February to 57 stunted toddlers and was third after Sumorame village and Pecabean River. From this data, Kendal Pecabean Village is included in one of the villages with the highest stunting incidence from 2020 to 2022 (Dinkes Kab Sidoarjo, 2022).

From the description above, the research problem is that the incidence of stunting is still high so that researchers are interested in researching about "Overview of Mother's knowledge about Nutrition and Mother's parenting on the Incidence of Stunting in Kendal Pecabean Village,Working Area of the Candi Public Health Center.

2 RESEARCH METHODS

This type of research is *a cross section* study**.** Researchers examine objects in the field using *descriptive* research properties or descriptions. In this study it was used by filling out questionnaires. This research is about the description of mother's

knowledge about nutrition and mother's parenting on the incidence of stunting in Kendal Pecabean Village, Working Area of the Candi Public Health Center. The target population in this study was 40 toddlers aged 24-59 months in Kendal Pecabean Village, Candi Public Health Center Working Area. The sample of this study was mother's of toddlers and toddlers aged 24-59 months in Kendal Pabean Village, Working Area of the Candi Public Health Center. In this research using *total sampling techniques.* Where researchers took data from 40 stunting toddlers aged 24-59 months in Kendal Pecabean Village, Working of Area Candi Public Health Center. The independent variable was the mother's knowledge about nutrition and parenting and dependent variable is the incidence of stunting. This research was conducted at the Candi Public Health Center with a period of 2 months (January 7, 2023 – March 31, 2023). The instrument used in collecting data in this study was a questionnaire.

3 RESULTS

Table 1. Frequency Distribution Based on the Age of Toddlers in Kendal Pecabean Village, Working Area of Candi Public Health Center

No.	Age of Toddler	N	Percentage
1	24 - less than 36 months	19	48%
2	36 - less than 48 months	12	30%
3	48 – less than 59 months	9	23%
	Total	40	100%

Table 2. Frequency Distribution by Gender in Kendal Pecabean Village, Working Area of Candi Public Health Center.

No	**Gender**	**N**	**Percentage**
1	Man	20	50%
2	Woman	20	50%
	Total	40	100%

No.	Number of Children	N	Percentage
1	5	1	3%
2	4	2	5%
3	3	10	25%
4	2	18	45%
5	1	9	23%
	Total	40	100%

Table 3. Frequency Distribution Based on Number of Children in Kendal Pecabean Village, Working Area of Public Candi Health Center

Table 4. Frequency Distribution of Respondents Based on Age in Kendal Pecabean Village, Working Area of Public Candi Health Center

No	Age of Respondents	N	Percentage
1	Early adulthood (age 26-35 years)	22	55%
2	Late adulthood (age 36-45 years)	17	43%
3	Early childhood (age 46-55 years)	1	3%
	Total	40	100%

Table 5. Table 5 Frequency Distribution of Respondents Based on Parental Education in Kendal Pecabean Village, Working Area of Public Candi Health Center

No	Education	Father		Mother	
		N	Percentage	N	Percentage
1	SD	1	3%	1	3%
2	SMP	3	8%	2	5%
3	SMA	20	50%	24	60%
4	SMK	5	13%	7	18%
5	D3	5	13%	1	3%
6	S1	6	15%	5	13%
	Total	40	100%	40	100%

Table 6. Frequency Distribution of Respondents Based on Parents' Work in Kendal Pecabean Village, Working Area of Public Candi Health Center

No	Work	Father		Mother	
		N	Percentage	N	Percentage
1	Private	25	63%	9	23%
2	Self employed	4	10%	2	5%
3	Farm	9	23%	0	0%
4	Construction laborers	2	5%	0	0%
5	Teacher	0	0%	4	10%
6	Not Working	0	0%	25	63%
	Total	40	100%	40	100%

Table 7. Frequency Distribution of Respondents Based on Who Toddlers Live with in Kendal Pecabean Village, Working Area of Public Candi Public Health Center

No.	Who To Live With	N	%
1	Parents	27	68%
2	Caregiver	13	33%
	Total	40	100%

Table 8. Table 8 Frequency Distribution Based on Mother's Knowledge of Nutrition in Kendal Pecabean Village, Working Area of Public Candi Health Center

No	Knowledge	N	%
1	Good	21	53%
2	Enough	12	30%
3	Less	7	18%
	Total	40	100%

Table 9. Frequency Distribution of Respondents Based on Mother's Parenting Style in Kendal Pecabean Village, Working Area of Public Candi Health Center

No.	Parenting	N	%
1	Good	25	63%
2	Enough	10	25%
3	Less	5	13%
	Total	40	100%

Table 10. Frequency Distribution Based on the Incidence of Stunting in Kendal Village, Pecabean, Working Area of Public Candi Health Center

No.	Nutritional Status of Tb/U	N	%
1	Very Short	6	15%
2	Short	15	38%
3	Normal	17	43%
4	Tall	2	5%
	Total	40	100%

4 DISCUSSION

4.1 Mother's Knowledge of Nutrition

The results of this study showed that respondents' knowledge about nutrition in toddlers with good criteria was 21 (53%) people, respondents' knowledge about nutrition with sufficient criteria was 12 (30%), and respondents' knowledge about nutrition with less criteria was 7 (18%) people. According to researchers, based on the results of the study above, it shows that most of the respondents' knowledge about nutrition in toddlers is with good criteria as many as 21 (53%) people. This is because most respondents have the last education at the high school level and the age of respondents is mostly 26-36 years.

This research is in line with research conducted by Yosika (2022), which states that if a mother knows and has good knowledge (93%) about Nutrition-Aware Families and the importance of knowing the nutritional status of toddlers regularly every month, mothers can do something to improve the health of their children, so that the knowledge possessed by mothers of toddlers is the basis for making changes. Therefore, a person's ability to do something depends on the knowledge they have (Wulandari, 2022; Davison et al., 2019; Demilew et al., 2020).

Apart from education, the age of respondents also affects the level of knowledge obtained. Where, usually at a productive age they have a high sense of knowledge of

something and will look for information from various media such as google, television, or social media. This is in accordance with research conducted by Pangesti (2018), that in productive age is the age that plays the most role and has dense activity and has good cognitive abilities. So, at this age it has an influence towards the level of knowledge (Putra & Podo, 2017).

From the description above, researchers concluded that most of the knowledge of toddler mothers about nutrition in toddlers is with good criteria as many as 21 people. So it is recommended for mothers of toddlers with a level of knowledge of good criteria and sufficient criteria to always be monitored in terms of knowledge so that their knowledge can be maintained or improved by cadres or health workers. While mothers of toddlers with less criteria, it is hoped that more intensive counseling will be carried out by health workers related to the incidence of stunting in Kendal Pecabean Village, Working Area of Candi Public Health Center.

4.2 Mother's Parenting

The results of this study showed that 25 (63%) people with good criteria, 10 (25%) mothers, and 5 (13%) less mothers. According to researchers, based on the results of the study above, it shows that the parenting style of mothers is mostly with good criteria as many as 25 (63%) people. Researchers assume that mother's parenting is mostly good because toddlers are taken care of by their own parents. Where the mother's role in parenting patterns can be in the form of attitudes and practices of mother's care in her closeness to children, care, how to feed, and affection. The parenting pattern of each mother is different can be influenced by several supporting factors including the age of mothers who are mostly aged 26-36 years, maternal education which is mostly with the last level of high school education, the work of mothers who are mostly not working (IRT) and the number of children who mostly have 2 children.

The results of this study are in accordance with research conducted by Cyntia, Yuni, and Iqlima (2020) stating that there is no relationship between mother's parenting and nutritional status. Parenting is the ability of families, especially mothers or caregivers, to provide time, attention, support to children so that they can grow and develop as well as physically, mentally and socially (Widyanata et al., 2020).

From the study, it can be concluded that the mother's parenting style is mostly with good criteria as many as 25 people. So it is recommended that the parenting style of mothers with good criteria and sufficient criteria is expected to be monitored by health workers and village cadres so that they can always be maintained. As for mothers of toddlers with less parenting, it is expected that counseling will be carried out by health workers or cadres about good parenting in children ranging from food monitoring to environmental hygiene monitoring carried out on parents or caregivers of toddlers in order to reduce the risk of increasing stunting events.

4.3 Stunting Events

The results showed that toddlers with TB/U nutritional status with very short category as much as 6 (15%), toddlers with TB/U nutritional status with short category as much as 15 (38%), toddlers with TB/U nutritional status with normal category as much as 17 (43%), and toddlers with TB/U nutritional status with high category as much as 2 (5%). According to researchers, based on the results of the study above, it showed that there were 21 toddlers who were stunted with a very short category of 6 (15%), toddlers with nutritional status of TB / U with a short category of 15 (38%). This is due to lack of nutritional intake in children that occurs in the long term, causing disruption of growth in children.

This is in line with the results of Pranowo's research (2021) which shows that the highest prevalence of stunting at the age of 2,4-59 months, is 57.9 (Amalia, 2020). At the age of 24 months, toddlers enter the weaning phase and a period of high activity in exploring the surrounding environment. In addition, the gross motor of toddlers also grows and develops rapidly. At this stage some toddlers will face several possibilities that cause nutritional deficiencies, namely decreased appetite, low nutritional intake, decreased sleep hours, easy infection when mothers/ caregivers pay less attention to hygiene and sanitation. The process of being short 52 or stunting in children in an area begins at the age of about 6 months and appears mainly in the first 2 to 3 years of life (Amalia, 2020).

It can be concluded that, most toddlers are stunted with a very short category of 15 toddlers and a short category of 6 toddlers. Therefore, toddlers with normal and high categories are expected to continue monitoring their growth and development by health workers and cadres so as not to experience stunting. Meanwhile, for toddlers with very short and shortened categories, it is necessary to monitor the growth and development of toddlers more intensively at this age by health workers or village cadres, especially in fulfilling nutritional intake and hygiene that must always be applied. In order to overcome the incidence of stunting in a fast and precise way.

5 CONCLUSION

From this research, mother's knowledge about nutrition in toddlers 24-59 months in Kendal Pecabean Village, Working Area of Candi Public Health Center Sidoarjo, mostly has good knowledge. Mother's parenting style for toddlers 24-59 months in Kendal Pecabean Village, Working Area of Candi Public Health Center Sidoarjo mostly has a good parenting style. The incidence of stunting in toddlers 24-59 months in Kendal Pecabean Village, Working Area of Candi Public Health Center, most of the stunted toddlers are 21 toddlers with a very short category of 6 and a short category of 15 toddlers.

6 REFERENCE

Abiyu, C., & Belachew, T. (2020). Level and predictors of mothers' knowledge and attitude on optimal complementary feeding in West Gojjam Zone, Northwest Ethiopia. Nutrition and Dietary Supplements, 12, 113–121. https:// doi. org/10. 2147/ NDS. S2572 06.

Adam, M., Tomlinson, M., Le Roux, I., LeFevre, A. E., McMahon, S. A., Johnston, J., Kirton, A., Mbewu, N., Strydom, S., Prober,C., & Bärnighausen, T. (2019). The Philani MOVIE study: a cluster-randomized controlled trial of a mobile video entertainment-education intervention to promote exclusive breastfeeding in South Africa. BMC Health Services Research, 19(1), 211. https:// doi. org/ 10. 1186/ s12913-019-4000-x

Agedew, E., Misker, D., Gelibo, T., Tadelle, A., Eyasu Makonnen, S., Bekele, W. A., Mekonnen, Y., Belay, A., Challa, F., Awoke,T., Gemeda, N., Kerebih, H., Shiberu, S., & Debella, A. (2022). Does moringa stenopetala based diet consumption decrease burden of under nutrition in under-five childre Southern Ethiopia? Heliyon. https:// doi. org/ 10. 1016/j. heliyon. 2022. e10285

Agustina, N. (2022). Apa itu Stunting. Kementerian Kesehatan Direktorat Jenderal Pelayanan Kesehatan, https://yankes.kemkes.go.id/view_artikel/1516/apa-itu-stunting (accessed Jan. 07, 2023).

Amalia, K.R. (2022). Faktor Risiko Kejadian Stunting Pada Balita Usia 24-59 Bulan Di Wilayah Kerja Puskesmas Cigandamekar Kabupaten Kuningan, pp. 1–23.

Ariati, L. I. P. (2019). Risk factors for stunting in toddlers aged 23–59 months. OKSITOSIN Jurnal Ilmiah Kebidanan, 6(1),28–37.

Astuti, S.I, Arso, S.P., and Wigati, P.A. (2020). Profil Kesehatan Kabupaten Sidoarjo. Anal. Standar Pelayanan Minimal Pada Instal. Rawat Jalan di RSUD Kota Semarang, vol. 3, pp. 103–111.

Athavale, P., Hoeft, K., Dalal, R. M., Bondre, A. P., Mukherjee, P., & Sokal-Gutierrez, K. (2020). A qualitative assessment of barriers and facilitators to implementing recommended infant nutrition practices in Mumbai, India. Journal of Health Population and Nutrition, 39(1), 7. https:// doi. org/ 10. 1186/ s41043-020-00215-w

Barone, L., Carone, N., Salazar-Jimenez, J.-G., & Ortíz Muñoz, J. A. (2021). Enhancing food habits via sensitivity in rural low SES mothers of children aged 1–3 living in Colombia: a randomized controlled trial using video-feedback intervention. Attachment & Human Development, 23(6), 831–852. https:// doi. org/ 10. 1080/ 14616 734. 2020. 1784243.

Black, M. M., Delichatsios, H. K., Story, M. T., & Nestlé Nutrition Institute. (2020). Nutrition education: strategies for improving nutrition and healthy eating in individuals and communities MM Black HK. Delichatsios MT Story SAG. Karger (eds) https:// doi. org/ 10. 1159/ isbn. 978-3-318-065282

BPS RI and Kemkes RI. (2021). Hasil Survei Status Gizi Indonesia (SSGI); pp. 1–7, 2021.

Davison, K. M., D'Andreamatteo, C., & Smye, V. L. (2019). Medical nutrition therapy in Canadian federal correctional facilities. BMC Health Services Research, 19(1), 89. https:// doi. org/ 10. 1186/ s12913-019-3926-3.

Demilew, Y. M., Alene, G. D., & Belachew, T. (2020). Effect of guided counseling on nutritional status of pregnant women in West Gojjam zone, Ethiopia: a cluster-randomized controlled trial. Nutrition Journal, 19(1), 38. https:// doi. org/ 10.1186/ s12937-020-00536-w.

Dinkes Kab. Sidoarjo. (2022). Profil Kesehatan Kabupaten Sidoarjo Tahun 2022. Dinas Kesehat. Kabupaten Sidoarjo, p. 200.

Newsroom, J. (2023). Targetkan Stunting Jatim Turun Hingga 13,5% Tahun 2024, Wagub Emil: Intervensi Harus Sesuai Data Riil Di Lapangan. Dinas Kominfo Provinsi Jawa Timur, https://kominfo.jatimprov.go.id/berita/targetkan-stunting-jatim-turun-hingga-13-5-tahun-2024-wagub-emil-intervensi-harus-sesuai-data-riil-di-lapangan (accessed Jan. 07, 2023).

Prasetyo, Yoyok Bekti., Permatasari, Pipit., Susanti, Henny Dwi. (2023). The effeect of mothers' nutritional education and knowledge on children's nutritional status: a systematic review. International Journal of Chil Care and Education Policy.
Putra, A.W.S and Podo, Y. (2017). Faktor-faktor yang mempengaruhi tingkat pengetahuan masyarakat dalam kejadian stunting, Urecol 6th, pp. 305–314, [Online]. Available: http://journal.unimma.ac.id/index.php/urecol/article/view/1549.
Rokom. (2021). Penurunan Prevalensi Stunting tahun 2021 sebagai Modal Menuju Generasi Emas Indonesia 2045. sehatnegeriku, https://sehatnegeriku.kemkes.go.id/baca/umum/20211227/4339063/penurunan-prevalensi-stunting tahun-2021-sebagai-modal-menuju-generasi-emas-indonesia-2045/ (accessed Jan. 07, 2023).
Setyawati V.A.V and Ramadha, F. (2020). Pengaruh kampung KB pada intervensi gizi sensitif stunting di Desa Janegara. J. Gizi Indones. (The Indones. J. Nutr., vol. 9, no. 1, pp. 42–47, 2020, doi: 10.14710/jgi.9.1.42-47.
Suparyanto dan Rosad. (2020). Gambaran Pengetahuan Gizi dan Pola Asuh Ibu terhadap Kejadian Stunting," Suparyanto dan Rosad, vol. 5, no. 3, pp. 248–253.
Susanti, D.F. (2022). Mengenal Apa Itu Stunting," Kementerian Kesehatan Direktorat Jenderal Pelayanan Kesehatan, https://yankes.kemkes.go.id/view_artikel/1388/mengenal-apa-itu-stunting (accessed Jan. 07, 2023).
Widyanata, C Della., Arief, Y.S., and Kurnia, I.D. (2020). Gambaran Pengetahuan Ibu Dan Pola Asuh Dalam Pemberian Makan Dengan Status Gizi Pada Balita Di Kecamatan Kertosono, Kabupaten Nganjuk. BIMIKI (Berkala Ilm. Mhs. Ilmu Keperawatan Indones., vol. 8, no. 2, pp. 63–73, 2020, doi: 10.53345/bimiki.v8i2.130.
Wulandari, Y. (2022). Gambaran Pengetahuan Dan Perilaku Keluarga Sadar Gizi Pada Ibu Balita Stunting Di Wilayah Puskesmas Perawatan Lubuk Durian Bengkulu Utara Tahun 2022, Braz Dent J., vol. 33, no. 1, pp. 1–12.