

Healthy Practices of Mother's Toddlers in the Household Setting Related to the Incidence of Stunting in Tasikmalaya City

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Abstract: Reducing stunting has been the focus of the Indonesian government in the last 5 years. As stated in the 2020-2024 RPJMN, stunting is a national program with a national target of reducing stunting prevalence by 14% in 2024. SDKI data for 2023 shows a stunting prevalence of 21.9%. The risk factors for stunting are very complex, healthy maternal behavior in interacting with toddlers is one of the factors that needs to be considered. The purpose of this study was to analyze healthy maternal behavior in households with stunting incidents in the Kawalu sub-district of Tasikmalaya City. Healthy behaviors in this study include early breastfeeding initiation practices, exclusive breastfeeding practices, routine toddler weighing practices to integrated health posts, hand washing with soap (CTPS) practices, and toddler feeding practices. The research method used was case-control with 170 respondents (85 cases and 85 controls). The data collection process was conducted through interviews with toddler mothers using questionnaires. The collected data were analyzed using the Chi Square statistical test at an alpha significance level of 0.05. The results showed a significant relationship ($p < 0.05$) between the variables of Early Breastfeeding Initiation (IMD), exclusive breastfeeding practices, routine toddler weighing practices, mother hand washing practices with soap (CTPS), toddler feeding practices with the incidence of stunting in toddlers. Suggestions for toddler mothers to improve healthy behavior at home to prevent stunting in toddlers.

Keyword: stunting; toddler; mother

INTRODUCTION

Stunting is a chronic malnutrition that occurs in toddlers since the first 1000 days of life. The causes of stunting are very complex including direct and indirect factors. In addition to nutritional intake factors from pregnancy to the age of 2 years and the occurrence of infections that are suspected to be direct causes. Toddlers who get adequate nutritional intake can grow and develop well physically, in terms of motor skills and cognitive abilities.

Indirect factors include healthy behavior, environmental sanitation and access to health services. Healthy behavior of mothers in interacting with toddlers is one of the factors that need to be considered. This is because toddlers spend most of their time at home with their mothers. Clean and Healthy Living Behavior (PHBS) in the household setting includes the behavior of providing

exclusive breastfeeding, weighing toddlers at the integrated health post, the habit of washing hands with soap and smoking behavior at home.

Information conveyed by the Acting Mayor of Tasikmalaya in front of the Stunting Reduction Acceleration Team (TPPS) was that the number of stunting cases according to SSGI data in 2022 in the city of Tasikmalaya was 22.4%, while the E-PPGBM report noted that Kawalu District was ranked first in the number of stunting cases.(Tasikmalaya City Government, 2023). Data recorded at the Kawalu Health Center showed that stunting cases in 2023 were 19.2%, making it the highest number in Tasikmalaya City. Various efforts to reduce stunting have been made and have decreased, but are still far from the Tasikmalaya City Government's target of 14% in 2024.

The performance report of the Tasikmalaya City Health Service in 2022 stated that one of the targets, namely that households with PHBS had only reached 43.88%, still below the target set at 50%.(Tasikmalaya Health Office, 2022). Based on the profile of the Tasikmalaya City Health Office in 2022 related to the Household PHBS indicator, the coverage of deliveries by health workers was 92%, babies received exclusive breastfeeding of 67.6%, and toddlers were weighed routinely 72.3%.

The high number of stunting cases in Tasikmalaya city is one of them in the working area of the Kawalu Health Center which includes three sub-districts. The coverage of the Kawalu Health Center has 100% for deliveries by health workers, exclusive breastfeeding coverage of 54.6%, babies weighed 90.8%. A preliminary survey conducted by the researcher provided information related to healthy behavior in the household setting that many mothers of toddlers have not implemented healthy practices in interactions with babies and toddlers, including some mothers do not initiate early breastfeeding, some mothers do not provide exclusive breastfeeding (42%), the practice of weighing babies at the integrated health post irregularly, poor hand washing practices with soap, and inadequate toddler food management practices. Based on the conditions above, the formulation of the research problem is whether there is a correlation between healthy practices of mothers of toddlers in the household setting and the incidence of stunting in toddlers.

METHOD

This study used a case-control approach. Cases were toddlers aged 24-59 months who were recorded as stunting at the Kawalu Health Center in Tasikmalaya City. The control group was toddlers with the same age range and gender but did not experience stunting. The number of toddlers who participated as cases was 85 toddlers and controls were 85 toddlers. The mothers of

the toddlers acted as respondents. The independent variables in this study were healthy behavior in the household which was part of the PHBS household order including the practice of providing exclusive breastfeeding, the practice of routine toddler weighing at the integrated health post, the practice of hand washing with soap (CTPS), and toddler eating behavior. The dependent variable was the nutritional status displayed in the form of toddler stunting incidents obtained from records and verified by the health center. The data collection process was through interviews with toddler mothers using a questionnaire. The collected data were analyzed using the Chi Square statistical test and multivariate analysis using the logistic regression test at an alpha significance level of 0.05.

RESULTS

Participants characteristics

Participants in this study were 170 mothers who had toddlers aged 6-59 months consisting of 85 mothers with stunted toddlers based on records at the health center, and 85 mothers with non-stunted toddlers. The requirements to become a participant were that the toddler lived with the mother as the main caregiver and the mother stated that she was willing to become a participant by filling out an informed consent. The results of the study provided information that the majority (57.6%) of the mother's education level was junior high school (equivalent to junior high school). The age of the mother in the case and control groups was almost the same with an average of 33.5 years and the youngest age was 20 years while the oldest age was 47 years.

Univariate Analysis

Table 1. Overview of research variables

Variables	Category	F	%
Practice of Early Breastfeeding Initiation (IMD)	No IMD	34	20.0
	Yes, IMD	136	80.0
Exclusive breastfeeding practices	Breastfeeding is not exclusive	57	33.5
	exclusive breastfeeding	113	66.5
Practice of routinely weighing toddlers at integrated health posts (in the last 3 months)	Not routine	29	17.1
	Routine	141	82.9
CTPS practice by mothers	Not good	24	14.1
	Good	146	85.9
Toddler feeding practices	Not good	26	15.3
	Good	144	84.7

n = 170

Bivariate Analysis

Table 2. Relationship Between Early Breastfeeding Initiation (EBI) Practices And Stunting Incidence

Healthy practices for mothers of toddlers	Stunting		Stunting incident		Total		p- value	OR (95% CI)
	f	%	f	%	f	%		
Not EBI	26	30.6	8	9.4	34	20.0	0.001	4,242 (1,791–10,043)
Yes, EBI	59	60.4	77	90.6	136	80.0		
Breastfeeding is not exclusive	46	54.1	11	12.9	57	33.5	0,000	7,935 (3,697–17,028)
Exclusive breastfeeding	39	45.9	74	87.1	113	66.5		
Not weighing the babies regularly	23	27.1	6	7.1	29	17.1	0.001	4,884 (1,874–12,732)
Regularly weighing babies	62	72.9	79	92.9	141	82.9		
Inadequate Handwash's soap	17	20.0	7	8.2	24	14.1	0.047	2,786 (1,090–7,120)
Adequate handwash's soap	68	80.0	78	91.8	146	85.9		
Poor eating pattern	19	22.4	7	8.2	26	15.3	0.019	3,208 (1,270 –8,102)
Good eating pattern	66	77.6	78	91.8	144	84.7		

n = 170

DISCUSSION

1. The relationship between exclusive early breastfeeding initiation (EBI) practices and stunting incidence

The results of the data analysis showed that there was a significant relationship between early breastfeeding initiation practices and stunting incidents. Babies who were not given the opportunity for EBI were 4 times more likely to experience stunting. EBI is a practice of giving babies the opportunity to come into contact with the mother's skin and find their own nipples as the main source of life. This EBI practice is also a way for babies to get colostrum, which is the first breast milk that comes out of the mother which is produced during pregnancy. Colostrum contains high protein and antibody nutrients which are very good for newborns to protect against bacterial or viral infections.(Nirvana, 2014). The practice of IMD is an initial way to provide colostrum to the baby and stimulate the mother to produce breast milk which is very important for the baby's future life.

In addition, researchers believe that when carrying out IMD, there will be interaction between mother and baby that occurs naturally. The relationship between the implementation of EBI and the incidence of stunting (Kusumaningsih et al., 2023) This is because mothers who do IMD have a higher emotional closeness (bonding) towards their babies so that the possibility of providing exclusive breastfeeding is higher and conversely, mothers who do not do IMD will find it easier to make decisions about providing complementary foods due to the lack of closeness between the mother and her baby.

The results of this study are relevant to several previous researchers in other regions who showed that there was a significant relationship between early breastfeeding initiation practices and the incidence of stunting. (Kusumaningsih et al., 2023). Research conducted by (Punuh et al., 2022) also showed that there was a relationship between early initiation of breastfeeding and stunting in Bolaang District, East Mongondow Regency.

2. The relationship between exclusive breastfeeding practices and stunting incidence

The results of statistical analysis showed a significant relationship between the practice of exclusive breastfeeding and the incidence of stunting in toddlers. Toddlers in the group who did not receive exclusive breastfeeding were more likely to experience stunting with a risk of 7.935 times compared to babies who received exclusive breastfeeding. Exclusive breastfeeding is the main source of food for babies because it contains various nutrients that are needed by the baby's body completely. The main factor in the content of exclusive breastfeeding that is not found in other milk products is the antibodies found in breast milk. The practice of providing exclusive breastfeeding to babies means only giving breast milk for the first 0-6 months of the baby's life without additional food or other fluids such as formula milk.

Breast milk is the best food for babies because it has the best nutritional balance and can protect babies from possible disease attacks. (Nurqalbi Sampara & Hasriani Saleng, 2022). According to (Sampe et al., 2020) Some of the advantages of providing exclusive breastfeeding include breast milk being the best nutrition for babies because it has the most complete composition, providing exclusive breastfeeding can increase mental and emotional intelligence, and prevent infections and allergies in babies. (Roze et al) in Daglas (2020) stated that providing breast milk alone can increase the development of the nervous system in newborns (Daglas et al., 2020).

As is widely known that breast milk is very necessary for babies in their early life phase, but not all babies get it as shown by the results of this study, as many as one third of respondents do

not give exclusive breast milk to babies. Failure to provide exclusive breast milk can be caused by several social problems of mothers such as low knowledge and motivation of mothers, weak support from husbands and families.(Junarti et al., 2020). The relationship with stunting incidents is supported by research results(Hadi et al., 2021)shows that toddlers from poor families who receive exclusive breastfeeding have a 20% lower chance of becoming stunted than those who do not receive exclusive breastfeeding. In addition, research(Trihandayani & Supriatin, 2023)shows that there is a relationship between exclusive breastfeeding and the incidence of stunting in Cirebon district.

3. Relationship between toddler weighing practices and stunting incidents

The results of the study showed that there was a significant relationship between maternal practices in routinely weighing toddlers and the incidence of stunting, toddlers who were not routinely weighed were at risk of experiencing stunting by 4.8 times. Routine toddler weighing activities are a structured program in Indonesia and are activities that must be carried out by mothers who have toddlers. Routine toddler weighing every month at the integrated health post will monitor the growth and development of toddlers so that it can be known early if there are health problems in infants and toddlers so that they can be handled quickly.

It is important for mothers to know the normal growth of toddlers. Bringing toddlers to the integrated health post has the benefit of knowing the health of toddlers, preventing toddler growth disorders, knowing early if toddlers experience growth failure with indications of weight not increasing or being below the red line or toddlers are suspected of having malnutrition so that they can be immediately referred to health services to get further treatment.(BKKBN, 2023). When mothers come to visit the integrated health post, in addition to routine weighing, mothers will also receive health education, information about toddler health conditions, immunization services and others. This is an activity that is very supportive in monitoring toddler growth and development and helping their health.

The results of this study are also relevant to research conducted by(Lumongga et al., 2020)which shows that regular visits by mothers to the integrated health post are related to the nutritional status of toddlers. The same thing was also stated by(Arifah et al., 2023)that the regularity of mothers in weighing their babies at the integrated health post is useful for monitoring the growth and development and health of toddlers so that the nutritional status of toddlers, including stunting, can be known.

4. Relationship between CTPS Practices and Stunting Incidents

The results of the data analysis showed that there was a relationship between the practice of washing hands with soap (CTPS) by mothers of toddlers and the incidence of stunting in toddlers. Poor CTPS habits tend to cause toddlers to experience stunting with a chance of 2.7 times compared to mothers who have good CTPS habits. Washing hands with soap is one of the daily hygiene practices of mothers of toddlers. The habit of washing hands with soap can remove microorganisms that may stick to the hands, thereby breaking the chain of transmission of disease infections in toddlers.

Toddlers still depend on adults around them to help with daily activities. Unhygienic adult practices can cause toddlers to experience health problems. Hand washing activities with soap carried out by mothers that are critical points include after defecation or changing diapers, before preparing food for toddlers including before making formula milk, and before breastfeeding. When the mother's unhygienic hands come into contact with toddlers when preparing food and feeding the child, it is likely that microorganisms on the mother's hands will enter the child's mouth and can then cause infections in the digestive tract. According to .(Bungawati et al., 2024)Some infectious diseases that can occur due to poor hand washing habits include hepatitis, typhus and diarrhea.

Diarrhea is an infectious disease that often occurs in toddlers, and is a risk factor for stunting because diarrhea that occurs for two or three days can affect a child's appetite.(Khadijah et al., 2024). Infections in toddlers, especially repeated ones, can disrupt growth and development so that toddlers' body growth is not optimal. Disorders of the digestive tract such as diarrhea if they often occur in toddlers can interfere with the absorption of nutrients by the body which ultimately increases the risk of malnutrition and disorders of growth hormones in children.

This research is in line with what has been done by(Sulistyorini et al., 2020)with the results of statistical tests there is a significant relationship between the habit of washing hands with soap and the incidence of stunting in toddlers in Tanjungpinang city ($p < 0.05$). The same thing is also the result of the study conveyed by(Artharini et al., 2022)which shows that mothers' hand washing habits are correlated with the incidence of stunting in the Jember region, Indonesia.

5. Relationship between eating behavior and stunting incidence

Data analysis on the variable of toddler eating behavior shows a significant relationship with the incidence of stunting. Mothers who are categorized as less good at managing toddlers' eating habits cause the risk of toddlers experiencing stunting 3 times higher than toddlers who get good eating patterns. Eating patterns in this study are how mothers prepare the types of food given to

children starting from the age of 6 months which are called complementary foods for breast milk (MP-ASI), the variety of types of food ingredients given and the texture of the food according to the child's age, as well as arrangements in terms of the frequency of meal times and giving toddlers the opportunity to finish food in a fun way.

Giving food before the age of 6 months can cause health problems because the child's digestive organs are not ready to receive and process food ingredients so that it can interfere with the absorption of nutrients by the body. Food variation is one thing that needs attention to ensure adequate nutrition from various types of food sources needed for toddler growth. In line with the results of the study (Damanik et al., 2020) that many mothers give instant food to babies rather than preparing it themselves from raw food. The simple food preparation factor and limited time are the reasons for choosing instant food for toddlers. This causes children to be less experienced in recognizing various types and textures of food ingredients which can cause children to become picky eaters.

Information from this study also illustrates that many mothers of toddlers do not set their children's meal times (frequency) regularly. This makes children not have a proper meal schedule every day. The habit of feeding children while playing is considered a way to condition children to eat in a fun situation for children. According to (Hidayati & Pratiwi, 2022) complementary food factors that predispose to malnutrition in children as stated in the study are low quality of micronutrients in food, low food diversity, lack of food sources from animal foods, frequent consumption of low-nutritious and low-calorie foods and inadequate eating patterns.

CONCLUSION

The results of the study showed that there was a significant relationship between healthy maternal practices in interacting with toddlers in the household with the incidence of stunting. These healthy practices include the practice of early initiation of breastfeeding (IMD) at risk, the practice of providing exclusive breastfeeding, the practice of weighing toddlers regularly, the practice of washing hands with soap (CTPS), and the practice of pattern's toddler meals.

Conflict of Interest

There is no conflict of interest in this research.

Acknowledgement

Gratitude is expressed to the Institute for Research and Community Service (LPPM) of Siliwangi University which provided funding for the research.

REFERENCES

- Arifah, S., Putu, N., & Pebriana, S. (2023). The Correlation Between The Mother's Knowledge About Toddler Growth And Development With The Compliance Of The Mother's Visit. *International Journal Of Health Science And Technology*, 5(1), 45–51.
- Artharini, OM, Bumi, C., & Noveyani, AE (2022). CORRELATION BETWEEN WASH AND STUNTING IN TODDLERS IN JEMBER REGENCY Globally In 2020, According To UNICEF / WHO / World Bank Group Globally In 2020 Who. *Journal of Public Health Sciences*, 13(3), 278–291.
- BKKBN. (2023). Benefits of Weighing Toddlers Every Month at Posyandu. <https://Kampungkb.Bkkbn.Go.Id/Kampung/23330/Intervention/590944/Manfaat-Menimbang-Balita-Setiap-Bulan-Di-Posyandu>
- Bungawati, Hasanudin, Maryam, Amsal, Saharudin, & Ratman. (2024). The Utilization Of Hand Soap For Hand Washing And Family Latrine Ownership As Preventive Measures Against Stunting In Infants And Toddlers In The Parigi Moutong District Of Central Sulawesi Province. *Journal Of Scientific Research, Education, And Technology*, 3(2), 484–494.
- Daglas, M., Sidiropoulou, C., Galanis, P., Bilali, A., Antonion, E., & Iatrakis, G. (2020). Maternal And Neonatal Factors Associated With Successful Breastfeeding In Very Preterm Infants. *International Journal Of Caring Sciences*, 13(1), 152–162. <https://Doi.Org/10.1016/J.Arcped.2013.06.018>
- Damanik, SM, Wanda, D., & Hayati, H. (2020). Feeding Practices For Toddlers With Stunting In Jakarta: A Case Study. *Pediatric Reports*, 12(1). <https://Doi.Org/10.4081/Pr.2020.8695>
- Tasikmalaya Health Office. (2022). PERFORMANCE REPORT OF GOVERNMENT AGENCIES OF TASIKMALAYA CITY HEALTH OFFICE IN 2022. Chrome-Extension://Efaidnbmnnnibpcajpcglclefindmkaj/Http://New-Esakup.Tasikmalayakota.Go.Id/Dokumen/104/2023/3b7c5f2175da61ab7f4b2c855be8f24a.Pdf
- Hadi, H., Fatimatasari, F., Irwanti, W., Kusuma, C., Alfiana, RD, Asshiddiqi, MIN, Nugroho, S., Lewis, EC, & Gittelsohn, J. (2021). Exclusive Breastfeeding Protects Young Children From Stunting In A Low-Income Population: *A Study From Eastern Indonesia*. 1–14.
- Hidayati, T., & Pratiwi, RD (2022). The Correlation Between Feeding Patterns And The Incidence Of Stunting In Children Aged 0-59 Months. *Journal Of Health Science*, 15(2), 126–131.
- Junarti, D., Raharjo, BB, & Rahayu, R. (2020). Role Factors That Affect Non-Exclusive Breastfeeding (Qualitative Study At Pegandan Health Center). *Public Health Perspectives Journal*, 5(2), 2020–2119. [Http://Journal.Unnes.Ac.Id/Sju/Index.Php/Phpj](http://Journal.Unnes.Ac.Id/Sju/Index.Php/Phpj)
- Khadijah, K., Sudaryati, E., & Lubis, Z. (2024). The Influence Of Parenting Patterns, Diarrhea Diseases And Infections On The Incidence Of Stunting Toddlers In Poor Families In Medan City. *Contagion: Scientific Periodical Journal Of Public Health And Coastal Health*, 6(1), 344. <https://Doi.Org/10.30829/Contagion.V6i1.19020>
- Kusumaningsih, N., Muharramah, A., Khairani, MD, & Abdullah. (2023). The Relationship Between Early Initiation of Breastfeeding (IMD) and the Incidence of Stunting in Astra Ksetra Village, Menggala District, Tulang Bawang Regency in 2022. *Aisyah Nutrition Journal*, 6(1).

- Lumongga, N., Sudaryati, E., & Theresia, D. (2020). The Relationship Of Visits To Posyandu With The Nutrition Status Of Toddlers In Amplas Health Center. Budapest International Research And Critics Institute (BIRCI-Journal): Humanities And Social Sciences, 3(3), 2165–2173. <https://doi.org/10.33258/Birci.V3i3.1149>
- Nirwana, A. . (2014). SI and Formula Milk. Nuha Medika.
- Nurqalbi Sampara, & Hasriani Saleng. (2022). The Effectiveness Of The Implementation Of Exclusive Breastfeeding On The Measurement Of Body Weight And Body Length At 6 Months Of Age As An Effort To Prevent Stunting. International Journal Of Health Science, 2(1), 13–17. <https://doi.org/10.55606/Ijhs.V2i1.541>
- Tasikmalaya City Government. (2023). City Level TPPS Coordination Meeting and Preparation of Special Community Kitchen Activities (Damascus) for Stunting Children. Portal.Tasikmalayakota. https://portal.tasikmalayakota.go.id/index.php/q/berita_detail/946
- Punuh, MI, Akili, RH, Tucunan, A., & Punuh, MI (2022). The Relationship Between Early Initiation Of Breastfeeding, Exclusive Breastfeeding With Stunting And Wasting In Toddlers In Bolaang Regency Of East Mongondow. International Journal Of Community Medicine And Public Health, 9(1), 71–75.
- Sampe, SA, Toban, RC, & Madi, MA (2020). The Relationship between Exclusive Breastfeeding and the Incident of Stunting in Toddlers. Introduction. Sandi Husada Health Scientific Journal, 11(1), 448–455. <https://doi.org/10.35816/Jiskh.V10i2.314>
- Sulistiyorini, L., Azizah, R., & Oktarizal, H. (2020). Association Between Toilet Availability And Handwashing Habits And The Incidence Of Stunting In Young Children In Tanjung Pinang City, Indonesia. Malaysian Journal Of Medicine And Health Science, 16(2), 215–218.
- Trihandayani, Y., & Supriatin, T. (2023). THE RELATIONSHIP OF EXCLUSIVE BREASTFEEDING WITH STUNTING INCIDENTS IN TODDLER AGES (1-5 YEARS) IN SAMPIRAN VILLAGE, TALUN DISTRICT, CIREBON REGENCY). Journal Of Social Research, 2(11), 3793–3799. <http://ijsr.internationaljournallabs.com/index.php/IJSR%0ATHE>