ISSN: 2309-5288 (Print)
ISSN: 2309-6152 (Online)
CODEN: JCLMC4

Journal of Coastal Life Medicine

The Effectiveness of Exclusive Breastfeeding Complementary Foods Training on Knowledge of Stunted Mothers with Children under Two Years Old in Kupang City, Indonesia

Received: 22 October 2022, **Revised:** 14 November 2022, **Accepted:** 26 December 2022

Odi Lodia Namangdjabar[1], Alberth Matusalak Bau Mali[1], Loriana Lorinda Manalor[1], Agustina A. Seran[1], Serlyansie V. Boimau[1], Hasri Yulianti[1], Adriana M.S Boimau[1],
[1]Department of Midwifery Poltekkes Kemenkes Kupang,

Corresponding author: Odi Lodia Namangdjabar,
email:odinamangdjabar222@gmail.com Department of Midwifery Poltekkes Kemenkes Kupang, Indonesia

Keywords:
Stunting, breastfeeding exclusive complementary foods, Knowledge, Children under two years old, Maternal

Abstract

Introduction. The prevalence of stunting under the age of five in East Nusa Tenggara Province (NTT) was 84,299 children under the age of five in 2019. Kupang City is one of the areas in NTT Province that prioritizes addressing poverty and stunting in Indonesia. Data from the Kupang City Health Department shows that 3,898 children under the age of five (29.9%) were affected by stunting cases in 2019. In 2020, the incidence of stunting increased to 5,151 (32.3%). The purpose of this study was to analyze the effectiveness of Exclusive breastfeeding complementary foods training on the knowledge of stunted mothers in the city of Kupang. Method. This study is a quasi-experimental study with a non-equivalent pretest-posttest design with a control group, This design uses two measurements, namely before and after the procedure, This study compares the group that received the educational intervention as a treatment group and the group that received no treatment as a control group. Result. it is known that there is a significant difference in knowledge p-value (p) = 0.020. Conclusion. In summary, there is a significant difference between the knowledge that has received guidance and brochures and the knowledge that has received guidance.

1. Introduction

The term "stunting problem" refers to a long-term nutritional issue that is impacted by the health of the mother or potential mother, the fetal period, infancy and toddlerhood, as well as illnesses experienced during infancy. The health sector typically carries out specific nutrition interventions, but these only account for 30% of the total; sensitive nutrition interventions, on the other hand, account for 70% and involve a variety of sectors, including food security, access to clean water and sanitation, poverty alleviation, education, social affairs, and so forth (Amalo, 2020). Stunting is a chronic condition that requires long-term care, which can make it stressful for mothers of young children. Stress is a state of discomfort in a novel situation (Yusuf, 2019); (Suhron, 2020); if the condition persists for a long time, it will result in low self-esteem in mothers because they have stunted children. Self-esteem is an evaluation of oneself (Suhron, 2016; 2017). Stunting is a chronic condition that requires long-term care, which can make it stressful for mothers of young children. Stress is a feeling of discomfort in a new situation (Yusuf, 2019; Suhron, 2020). If the condition persists for a long time, it will result in mothers having low self-esteem because their children are stunted. Self-esteem is an evaluation of oneself (Suhron, 2016; 2017).

ISSN: 2309-5288 (Print)
ISSN: 2309-6152 (Online)
CODEN: JCLMC4
Journal of Coastal Life Medicine

Undernutrition in children is a serious public health issue. In 2020, it was anticipated that 149 million children under the age of 5 were stunted (too short for their age), 45 million were wasting (too short for their height), and 38.9 million were overweight. This study sought to investigate prior research to identify the causes of malnutrition and add to the body of knowledge needed to create efficient remedies (Katoch OR, 2021). In 2018, there were 149 million instances of stunting worldwide (21.9%). However, this number has dropped by 198.2 million (32.5%) since 2000. In 2018, Asia accounted for 55% of all under-five stunted children worldwide, with Southeast Asia accounting for 25% of the global total (Indonesian Ministry of Health, 2018).

In Indonesia, the proportion of extremely short and short toddlers was 18% and 19.2% in 2013, respectively. While the frequency of short toddlers climbed to 19.3% in 2018, the incidence of extremely short stunting reduced to 11.5%. East Nusa Tenggara had the greatest prevalence of stunting and stunting in children under five between the ages of 0-59 months in 2018 (42.6%), while DKI had the lowest prevalence (17.7%) (East Nusa Tenggara Health Office, 2018). (WHO, 2018). The objective of this study was to evaluate the impact of supplementary foods education on mothers in Kupang City who have children under the age of two who are stunted. In this study, the treatment group—a group that got the educational intervention—was compared to the control group, which received no treatment. Measurements are taken twice in this design, once before and once after the intervention.

2. Method

This study is a quasi-experimental one with a control group and a non-equivalent pretest-posttest design. The sample for this study consisted of 106 women in Kupang City who had stunted infants under the age of two. These mothers were split into two groups, the intervention group and the control group, each of which comprised 53 participants. Univariate and bivariate statistical analyses were employed (Mann-Whitney test). In this study, the treatment group—a group that got the educational intervention—was compared to the control group, which received no treatment. Measurements are taken twice in this design—pre and post intervention.

3. Result

The results of the study show the distribution of the characteristics of the informant Maternity in the Kupang

No	Informant Characteristics	Total	%
1	Age of Maternal of Children under two years (years)		
	17-34	27	25.5
	≥ 35	79	74.5
	Total	106	100
2	Education		
	Base	73	67.9
	Secondary	33	32.1
	Total	106	100
3	Husband's age		
	17-34	20	18.9

ISSN: 2309-5288 (Print)
ISSN: 2309-6152 (Online)
CODEN: JCLMC4
Journal of Coastal Life Medicine

	≥ 35	86	81.1
	Total	106	100
4	Number of children		
	1 – 2	45	42.4
	3 – 4	6	5.6
	>4	55	52.0
	Total	106	100
	p-value (p) =0,020		

Source primer

According to the study's findings, there were 27 persons (25.5%) between the ages of 17 and 34 and 79 (74.5%) people who were above the age of 35. As many as 73 responders had only a rudimentary education. (68.9%), compared to respondents with secondary education, who numbered 33 people (31.1%), husbands over 35 years old were represented by 86 individuals (81.1), and those between the ages of 17 and 34 by 20 people (18.9%). According to the above-mentioned statistical test findings, the p-value (p) = 0.020. This indicates that the knowledge that got counseling and brochures and the knowledge that received counseling differ significantly from one another.

4. Discuss

Supplemental feeding is the most significant of the several elements that are known to have an impact on children's health and nutrition, including stunting. Stunting often starts and worsens in children aged 6 to 23 months, when they have a high requirement for nutrition but frequently suffer from a lack of diversity, quality, and quantity of food (Ni'mah, 2015). Pathogen exposure brought on by the consumption of unclean food can result in disease and impair the body's capacity to absorb nutrients (Irianto, 2014); (Helmyati, 2019) However, nutritional diversity throughout the crucial period of 6 to 23 months is the factor that most consistently corresponds with infant growth, despite the fact that exclusive breastfeeding supplementary meals is a complicated set of behaviors with many features (Indonesian Ministry of Health, 2018)

According to research by Katoch (2021), the mother education, household income, nutritional condition, age of the child, accessibility to a home sanitation facility, family size, birth order, and child's birth weight are the factors that are most consistently linked to malnutrition in children. Child malnutrition is also influenced by breastfeeding and child-rearing techniques, the type of cooking equipment and fuel used, the sex of the children, and their financial position. Explanation Decreased fat mass and wastage are related. Stunting often but inconsistently results in a lower fat mass. Leptin is one of the hormones secreted by fat, and it may stimulate the immune system. The higher mortality seen in wasting may possibly be caused by low-fat reserves' effects on the immune system.

When stunting is accompanied by decreased fat mass, there may be yet another mechanism associating wasting and stunting with higher mortality. Additionally, leptin may have an impact on bone development. This may help to explain why wasted kids with poor fat stores develop less linearly when their weight to height ratio stays low. It could also explain why episodes of wasting are frequently linked to stunting. However, stunting can happen even in children who are overweight or without wasting. Therefore, in groups where stunting is not linked to wasting and low-fat storage, food supplementation should be utilized with caution. Braid (2015). These findings suggest

ISSN: 2309-5288 (Print)
ISSN: 2309-6152 (Online)
CODEN: JCLMC4
Journal of Coastal Life Medicine

a complicated and dynamic bi-directional link between stunting and wasting in early children in rural Niger and a significant burden of concurrent stunting and wasting in this environment. To create and tailor treatments to improve child growth, more study is required to comprehend the interconnections and processes between these two situations. Khannmann (2021) According to Ulep's research (2022), more than 50% of the child stunting gap is caused by maternal factors. This illustrates how important mother biological and socioeconomic factors are in promoting children's linear growth.

The test findings revealed a substantial difference between the group that received counseling and brochures and the control group in terms of knowledge and attitudes. It may be claimed that employing counseling and brochures solely with people who receive counseling has an impact since there is a sizable difference. Health education is one method used to change the behavior of moms under the age of five. If effective approaches and media are used during the process, health education will be effective. The goal of health education is to increase people's capacity for maintaining and enhancing their health. You can utilize a variety of health education media, such as personalized techniques, brochures, and counseling using simulation media (Door to door). The findings of this study are consistent with those of Kisman et al. (2020), who found that simulation-based counseling had an impact on mothers' understanding of stunting in the working area of the Bonerombo Health Center in the North Buton Regency of Southeast Sulawesi Province.

The success of messages regarding stunting being delivered to moms is significantly influenced by the presence of media interventions. Mothers can learn to study new knowledge at any moment thanks to this link and information sharing. One of the major changes in education is the realization that learning is a process that helps individuals grow rather than an individual activity. According to the study's findings, using simulation as a platform for group learning can increase learning resources' accessibility and activity performance learning (Abidin et al., 2018).

Giving advice to replies. The guidance includes details on enhancing nutrition, beginning nursing early, and using only foods that are complimentary to breastfeeding. The usage of Maternal and Child Health manuals, including how to measure height and weight and look at the WHO curve to determine a toddler's nutritional condition, was also taught to the responders. Stunting is a nutritional issue that affects toddlers and is indicated by a shorter height than other kids their age. Notoatmodjo (2012) asserts that knowledge is the outcome of knowing and that it develops when humans feel certain objects. The five human senses—smell, sight, hearing, and touch—are used for sensing. The notion that people have about the world and everything in it, including people and their lives, is known as knowledge. A mother must be well knowledgeable about stunting since her ignorance of the condition might put her kid at danger of developing stunting.

In addition to counseling, posters on stunting and supplementary meals for exclusive breastfeeding were also supplied to respondents as information. Of course, moms will utilize this information as a guide while caring for their young children in daily life. The word perception itself refers to a person's viewpoint on something after receiving knowledge, either directly or indirectly. The attitude of mothers toward preserving health so that stunting is avoided can be determined by the information that parents, particularly mothers of children under the age of two, have regarding insights into stunting. Along with improving knowledge, following the post-test the maternal attitude also improved as a result of learning more about these items. This knowledge is highly helpful for reducing stunting, and parents who get counseling on stunting must absorb and retain it in order to carry out stunting prevention. According to Rahmawati (2019), Aridiyah (2015), and Chandra (2019), parents' perceptions of the symptoms and consequences, including the prevention of stunting, might influence their attitude toward preserving health (2011). Additionally, it is strategically important to monitor toddler growth at the integrated service post "POSYANDU" in order to identify growth abnormalities as soon as feasible (Trihono, et al, 2015).

ISSN: 2309-5288 (Print)
ISSN: 2309-6152 (Online)
CODEN: JCLMC4
Journal of Coastal Life Medicine

5. Conclusion

After receiving therapy, children under the age of two have a greater understanding of stunting. This indicates that nutrition education is beneficial in improving the understanding of mothers in Kupang City, Indonesia, whose children are stunted before the age of two.

Acknowledgements

We would like to appreciate those who are participating in this study. The manuscript was written in fulfillment of the requirement, writing that ethical clearance has been carried out at the Department of Midwifery Poltekkes Kemenkes Kupang, Indonesia with number No: LB.02.03/1/0134/2022. The author declares that three is no conflict of interest regarding the publication of this article

Reference

1. A.W. Onyango, E. Borghi, M. De Onis, M. Del Carmen Casanovas, and C. Garza, "Complementary feeding and attained linear growth among 6–23-month-old children," Public Health Nutr., vol. 17, no. 9, pp. 1975–1983, 2014, doi: 10.1017/S1368980013002401.

2. Abidin, A., Tasnim, T., Fatmawati, F. & Banudi, L. (2018). Risk Factors for Wasting in the Implementation of Full Day School for Children at Ummusabri Islamic Boarding School, Kendari. Journal Of Health Research" Voice Forikes"(Journal Of Health Research" Forikes Voice"), 9, 263- 268.

3. Amalo P. (2020). The number of stunting and malnutrition in the city of Kupang has soared.

4. Aridiyah, N. Rohmawati, and M. Ririanty. (2015). Factors Affecting Stunting on Toddlers in Rural and Urban Areas," e-Jurnal Pustaka Kesehat., vol. 3, no. 1, pp. 163–170, 2015, doi: 10.1007/s11746-013-2339-4.

5. Briend A, Khara T, Dolan C. Wasting and stunting--similarities and differences: policy and programmatic implications. Food Nutr Bull. 2015 Mar;36(1 Suppl):S15-23. doi: 10.1177/15648265150361S103. PMID: 25902610.

6. Candra, N. Puruhita, and J. Susanto. (2011). Risk Factors of Stunting among 1-2 Years Old Children in Semarang City," M Med Indones., vol. 45, no. 3, pp. 206–212,

7. East Nusa Tenggara Health Office. (2018). East Nusa Tenggara Health Profile 2018," in Kupang city health profile 2018, no. 0380,pp. 19–21.

8. Helmyati S. (2019). Stunting: Health Problems and Handling. UGM Press,

9. Indonesian Ministry of Health. (2018), National Riskesdas Report. Jakarta: Research and Development Ministry of Health, 2018.

10. Indonesian Ministry of Health. (2018). Stunting Bulletin, Ministry. healthy. RI, vol. 301, no. 5, pp. 1163–1178

11. Indonesian Ministry of Health. (2018). Indonesia Health Profile 2018 [Indonesia Health Profile 2018].

12. Indonesian Ministry of Health. (2018). The Situation of Short Toddlers in Indonesia, vol. ISSN 2442-, no. Children's day Toddler April 8th.

13. Irianto. (2014). Epidemiology of communicable and non-communicable diseases: a clinical guide. Bandung: Alphabet, pp.34-54

14. Katoch OR. (2021). Determinants of malnutrition among children: A systematic review. Nutrition. 2022 Apr;96:111565. doi: 10.1016/j.nut.2021.111565. Epub 2021 Dec 11. PMID: 35066367.

15. Kisman, Supodo. T, Munir. S, La Banudi. (2020). The effect of providing counseling methods on mothers' knowledge about stunting. Journal of Food Nutrition Media, Vol. 27, Issue 1, 2020

16. Kohlmann K, Sudfeld CR, Garba S, Guindo O, Grais RF, Isanaka S. (2012). Exploring the relationships between wasting and stunting

ISSN: 2309-5288 (Print)
ISSN: 2309-6152 (Online)
CODEN: JCLMC4
Journal of Coastal Life Medicine

among a cohort of children under two years of age in Niger. BMC Public Health. 21;21(1):1713. doi: 10.1186/s12889-021-11689-6. PMID: 34548050; PMCID: PMC8454021.

17. Ni'mah K. and S. R. Nadhiroh. (2015). Factors Associated with Stunting in Toddlers," Indonesian Nutrition Media., vol. 10, no. 1, pp. 13–19, 2015, [Online]. Available:https://e-journal.unair.ac.id/MGI/article/view/3117.

18. Notoatmodjo, S. (2012). Health education and behavior. Jakarta: Rineka Cipta

19. Suhron M, A Yusuf, R Subarniati, F Amir, Z Zainiyah. (2020). How does forgiveness therapy versus emotion -focused therapy reduce violent behavior schizophrenia post restrain at East Java, Indonesia?. In ternational Journal of Public Health Science (IJPHS) 9 (4), 214-219

20. Suhron M., (2016). Self-concept nursing care: Self-esteem/ Self-concept nursing care: Self-esteem (Self-esteem nursing care),” Publisher, Ponorogo: Unmuh Ponorogo Press.

21. Suhron, M. (2017). Mental Nursing Care The concept of Self Esteem/Care of Mental Nursing The concept of self-esteem”. Jakarta: Media Discourse Partners; 2017

22. Thurstans S, Sessions N, Dolan C, Sadler K, Cichon B, Isanaka S, Roberfroid D, Stobaugh H, Webb P, Khara T. (2021). The relationship between wasting and stunting in young children: A systematic review. Matern Child Nutr. 2022 Jan;18(1):e13246. doi: 10.1111/mcn.13246. PMID: 34486229; PMCID: PMC8710094.

23. Trihono et al. (2015). Short (Stunting) in Indonesia, Problems and Solutions. (Health Research and Development Agency)

24. Ulep VGT, Uy J, Casas LD.(2021).What explains the large disparity in child stunting in the Philippines? A decomposition analysis. Public Health Nutr. 2022 Nov;25(11):2995-3007. doi: 10.1017/S136898002100416X.. PMID: 34602121.

25. WHO, UNICEF & Group (2018). Levels and Trends in Child Malnuutrition,” pp. 1–16

26. Yusuf, Ah., Rika, S., Suhron, M.. (2019). Assessment of the Kempe Family Stress Inventory in self-care post-restrain schizophrenia," International Journal of Public Health Science (IJPHS) , vol. 8, no. 2, pp. 55-59