



Education on Nutrition, Sanitation, and IYCF to Increase Mother's Knowledge in Lokus Stunting Village

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ARTICLE INFO

Article history:

Received 24 January 2022

Accepted 31 May 2022

Published 10 June 2022

Keyword:

Stunting
Nutrition education
Sanitation and IYCF

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DOI: 10.30604/jjika.v7i2.890

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ABSTRACT

Stunting is a condition of growth failure on children under five only years caused by chronic malnutrition. Stunting is caused by multi-dimensional factors, not due to malnutrition in pregnant women and toddlers. The research aims to prove the influence of education on nutrition, sanitation, and also infant and young children feeding (IYCF) on increasing maternal knowledge. This type of research is experimental research using quasi experiment approach with nonrandomized control group pre-test– post test design research. The study population was mothers who had children aged 0 to 5 years. The variables studied were education on nutrition, sanitation, and IYCF. The test of differences in knowledge before and after the intervention in each group used statistical paired t-test. The results showed that there were differences in nutritional knowledge in the control group and intervention group (p-value=0,006 and 0,0001). There was no difference in sanitation knowledge in the control group (p-value=0,208) but there was difference in sanitation knowledge in the intervention group (p-value=0,669). There was no difference in IYCF knowledge in the control group (p-value=0,083) and there was a difference in IYCF knowledge in the intervention group (p-value=0,001). Height for age before and after intervention with p value 0.018 in the intervention group. There was no difference in maternal knowledge about nutrition, sanitation and IYCF before and after the intervention between the control and intervention groups, at the initial measurement with p-values 0.309, 0.991, 0.915 and the final measurements with p values of 0.289, 0.150 and 0.753. There was no difference in Z-score weight for age before and after between control and intervention groups with p value of 0.531 and there was no difference in z-score height for age between before and after intervention with p value 0.616. Based on the research results, it is hoped that local governments and related sectors will create innovative programs that can increase the scope of appropriate infant and young child feeding practices, including breastfeeding and complementary breastfeeding. In addition, the puskesmas is expected to increase cooperation among health workers in providing education related to IYCF and maximizing coaching activities for posyandu cadres in the context of increasing family assistance as an effort to prevent the incidence of stunting in toddlers from pregnancy.

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INTRODUCTION

Stunting is caused by multi-dimensional factors. The most decisive intervention in the First 1,000 Days of Life (HPK). The factors that cause stunting are 1) poor parenting practices (lack of knowledge about health and nutrition before and

during pregnancy, 60% of children aged 0-6 months do not get exclusive breastfeeding, 2 out of 3 children aged 0-24 months do not receive MP-ASI, 2) limited health services including Ante Natal Care (ANC), post natal and quality early learning (1 out of 3 children aged 3-6 years are not registered in PAUD, 2 out of 3 pregnant women have not taken supplements

adequate iron, decreased child attendance at Posyandu (from 79% in 2007 to 64% in 2013), not getting adequate access to immunization services, 3) lack of access to nutritious food (1 out of 3 pregnant women is anemic, nutritious food is expensive), 4) Lack of access to clean water and sanitation, 1 in 5 households still defecate in open spaces, 1 in 3 households do not have access to clean drinking water).(PDTT, 2017).

Stunting has an impact on the level of intelligence, vulnerability to disease, reduces productivity and then inhibits economic growth, increasing poverty and inequality. Stunting that occurs in children under 5 years is generally caused by nutritional factors. When viewed from the prevalence by age, when a baby is born, the incidence of stunting is 11%. From birth to 2 years, 60%. 2-5 years, 28%. (Millward, 2017). Meanwhile, according to Stewart et al., (2013), the incidence of stunting from 0 to 6 months is 10%, so it is estimated that the incidence of stunting aged 6-24 months is 50%. This period is the period with the highest incidence of stunting, which is mainly due to environmental factors including food factors, namely complementary foods which are mainly due to poor quality feeding practices.

The nutritional status of women before, during, and after pregnancy, including inadequate weight gain during pregnancy, affects birth and delivery outcomes. Fetal growth restriction causes the baby to be born too small, which has lifelong consequences. (Bhutta et al., 2013). Scientific evidence presented at a seminar organized by UNICEF-WHO (2012) reemphasized the importance of the first 1000 days of life (1000 HPK) window of time in which the foundations are laid to determine the achievement of one's physical, physiological and intellectual capacities in later life.

Indonesia is still facing various nutritional problems in the period of 1000 HPK. Research shows that women who have more control over household resources tend to be healthier and have better nutritional status and their families because women tend to spend more on nutrition, health and well-being of their household. For this reason, programs to improve nutrition should focus on increasing women's knowledge about nutrition and empowering women in decision making.

METHOD

This type of research includes experimental research using a quasi-experimental approach with a non-randomized control group pre-test – post-test design. The research design is as follows:

Table 1. Research Design Table

Grup	Pretest	Variabel Independen	Posttest
A	Y ₁	X	Y ₂
B	Y ₁	-	Y ₂

Description:

Y1: Level of knowledge, before being given education on nutrition, sanitation and IYCF

X: Providing education about nutrition, sanitation and IYCF

Y2: Level of knowledge about nutrition, sanitation and IYCF after being given mentoring

The flow of data collection is:

1. This study compares two groups, namely the treatment group and the control group. The treatment group was given an intervention in the form of assistance using booklets on nutrition, sanitation and IYCF and was given a

stimulant of funds to buy food for their toddlers for 25 days while the control group used leaflets.

2. Nutritional assistance is provided by researchers, Nutrition Implementing Personnel (TPG) and village midwives, assistance is carried out daily online (WA group) in the intervention group for 1 month. After that, the measurement of knowledge of maternal nutrition, sanitation and PMBA was carried out again.

The research population was all mothers of children under five who had stunted toddlers in the stunting locus village, Gedung Tataan sub-district, Pesawaran Regency.

The calculation of the research sample uses the formula for calculating the size of the two-mean difference test sample than the number of samples as many as 48 mothers who have stunting toddlers consisting of 24 treatment groups and 24 control groups.

RESULTS AND DISCUSSION

Table 1
Characteristics and Socio-Economic

	Mean	N	SD
a. Mother's Age			
Control	33,54	24	8,55
Intervention	29,17	24	5,64
b. Number Of Children			
Control	2,42	24	1,28
Intervention	1,71	24	0,69
c. Family Income			
Control	1,060,416	24	523,154
Intervention	1,262,500	24	737,099
d. Pekerjaan Ibu			
Control			%
- Housewife	24	100	
Intervention			%
- Housewife	24	100	
e. Mother's Education			
Control	24		%
- Never School	1	4,2	
- Not Completed elementary school	2	8,3	
- Finished elementary school	9	37,5	
- Junior High School	7	29,2	
- Senior High School	5	20,8	
Intervention	24		%
- Finished elementary school	7	29,2	
- Junior High School	11	45,8	
- Senior High School	6	25,5	
f. Sanitary infection results			
Control			
Before			
- High Risk	10	41,7	
- Low Risk	14	58,3	
After			
- High Risk	8	33,3	
- Low Risk	16	66,7	
Intervention			
Before			
- High Risk	10	41,7	
- Low Risk	14	58,3	
After			
- High Risk	1	4,2	
- Low Risk	23	95,8	

The results showed that the average age of the mother in the control group was 33.54 years and in the treatment group was 29.17 years. Meanwhile, the average number of children in the control group was 2.42 and in the treatment group 1.71.

Meanwhile, the average family income in the control group was Rp. 1,060,416 and in the treatment group the average was Rp. 1,262,500. For mothers' occupations, all mothers in the control and treatment groups were housewives, while for the level of education in the control group there were still mothers who had never attended school and did not finish elementary school.

The results of sanitation infection in the control group showed that before had a high risk of 41.7% and after a high risk of 33.3%. Meanwhile, the result of sanitation infection in the high-risk treatment group before the intervention was 41.7% and after the high-risk intervention was 4.2%.

Characteristics of Stunting Toddlers

The average age of children in the control group was 34.79 months and in the treatment group the average was 24.32 months. The sex of the children in the control group was 66.7% male and 33.3% female, while in the treatment group it was 33.3% male and 67.7% female. The average initial body weight did not increase in the control or treatment groups and the body length indicator showed an increase in PB or TB in the control and treatment groups, although not significant.

Table 2
Characteristics of Stunting Toddlers

Characteristics Toddlers	Mean	n	SD
Child Age	(Bulan)		
Control	34,79	24	9,62
Intervention	24,32	24	4,72
Jenis Kelamin Anak			
Control		%	
- Man	16	66,7	
- Women	8	33,3	
Intervention		%	
- Man	8	33,3	
- Women	16	66,7	
BB dan PB			
BB Begining			
Intervention	9,48	24	1.20
Control	11.03	24	11.02
BB Final			
Intervention	9.46	24	1.15
Control	11.04	24	1.83
PB Begining			
Intervention	78.23	24	3.68
Control	84.02	24	7.46
PB Final			
Intervention	79.14	24	3.78
Control	85.27	24	3.37

Table 3
Nutritional Status of Toddlers (W/U and TB/U) in the Control and Intervention Group

Nutritional Status	Group	Category Nutritional Status			Total
		1	2	3	
BB/U 1	Control	2 (8,3%)	9 (37,5%)	13(54,2%)	24 (100%)
	Intervention	0 (0%)	8 (33,3%)	16 (66,7%)	24 (100%)
BB/U 2	Control	2 (8,3%)	10 (41,7%)	12 (50,0%)	24 (100%)
	Intervention	0 (0%)	9 (37,5%)	15 (62,5%)	24 (100%)
TB/U 1	Control	6 (25,0)	18 (75%)	0 (0%)	24 (100%)
	Intervention	3 (12,5%)	16 (66,7%)	5 (20,8%)	24 (100%)
TB/U 2	Control	5 (20,8%)	12 (50%)	7 (29,2%)	24 (100%)
	Intervention	3 (12,5%)	9 (37,5%)	12 (50%)	24 (100%)

Description : BB/U : 1=Gz is bad, 2=Gz is less, 3=Gz is normal
 TB/U : 1= very short, 2=short, 3= normal.

Table 3
Mother Toddler Knowledge About Nutrition, Sanitation and IYCF

Variabel	N	Mean (Min-Max)	Rerata±s.b	p Value
Nutritional knowledge in control group				
Measurement 1	24	58,54(40-80)	58,54 ± 11,18	0,006
Measurement 2	24	65,83(25 – 95)	65,00 ± 15,86	
Nutritional knowledge in intervention group				
Measurement 1	24	54,79(15,75)	54,79 ± 13,95	0,0001
Measurement 2	24	70,00(40-90)	70,00 ± 10,43	
Sanitation knowledge in control group				
Measurement 1	24	87,21(67-93)	87,21 ± 6,92	0,669
Measurement 2	24	88,29(73-100)	88,29 ± 6,19	
Sanitation knowledge in intervention group				
Measurement 1	24	87,00(67-93)	87,00 ± 6,53	0,208
Measurement 2	24	88,83(80-100)	90,00 ± 5,63	
IYCF knowledge in control group				
Measurement 1	24	59,75(27-87)	59,75 ± 13,29	0,083
Measurement 2	24	65,50(47-93)	65,50 ± 10,67	
iYCF knowledge in intervention group				
Measurement 1	24	59,79(33-80)	59,79 ± 12,14	0,001
Measurement 2	24	70,88(47-93)	70,88 ± 14,49	

The nutritional knowledge of respondents in the control group in the first measurement was an average of 58.54 ± 11.18 and in the second measurement it became 65.00 ± 15.86 , the results of statistical tests showed there was a significant difference with a p value of 0.006. While the treatment group in the first measurement obtained 54.79 ± 13.95 and the second measurement 70.00 ± 10.43 , the statistical test results showed there was a difference before and after mentoring with a p value of 0.0001.

Respondents' knowledge about sanitation, in the control group in the first measurement the average was 87.21 ± 6.92 and in the second measurement it was 88.29 ± 6.19 , but statistically there was no significant difference with a p value

of 0.669. While the treatment group in the first measurement obtained 87.00 ± 6.53 and the second measurement 90.00 ± 5.63 , the statistical test results showed no difference before and after mentoring with a p value of 0.208

Knowledge of infant and child feeding (IYCF) respondents in the control group in the first measurement an average of 59.75 ± 13.29 and in the second measurement it became 65.50 ± 10.67 , but statistically there was no significant difference with p-value 0.083. Meanwhile, in the treatment group, the first measurement was 59.79 ± 12.14 and the second measurement was 70.88 ± 14.49 . The statistical test results showed that there was a difference before and after being assisted with a p-value of 0.001.

Table 4
Test for Differences in Knowledge of Nutrition, Sanitation and IDD after the Control and Intervention Groups

	kode	N	Mean	Std. Deviation	Std. Error Mean	Nilai p
Beginning						
Nutritional Knowledge 1	Intervention	24	54.79	13.947	2.847	0,309
	Control	24	58.54	11.178	2.282	
PMBA1 Knowledge 1	Intervention	24	59.79	12.144	2.479	0,991
	Control	24	59.75	13.290	2.713	
Higiene Knowledge 1	Intervention	24	87.00	6.534	1.334	0,915
	Control	24	87.21	6.922	1.413	
Finish						
Nutritional Knowledge 2	Intervention	24	70.00	10.426	2.128	0,289
	Control	24	65.83	15.857	3.237	
PMBA1 Knowledge 2	Intervention	24	70.88	14.498	2.959	0,150
	Control	24	65.50	10.669	2.178	
Higiene Knowledge 2	Intervention	24	88.83	5.631	1.149	0,753
	Control	24	88.29	6.189	1.263	

Table 5
Differences in weight and PB/TB after in groups Control and intervention

T	kode	N	Mean	Std. Deviation	Std. Error Mean	Mean Difference	Std. Error Difference	Nilai p
BB1	Intervention	24	9.479	1.2043	.2458	-1.5500	.5144	0,005
	Control	24	11.029	2.2135	.4518	-1.5500	.5144	
BB2	Intervention	24	9.475	1.1501	.2348	-1.5625	.4406	0,001
	Control	24	11.038	1.8268	.3729	-1.5625	.4406	
PB1	Intervention	24	78.23	3.681	.751	-5.787	1.698	0,002
	Control	24	84.02	7.458	1.522	-5.787	1.698	
PB2	Intervention	24	79.14	3.776	.771	-6.133	1.691	0,001
	Control	24	85.27	7.374	1.505	-6.133	1.691	

Table 6
Differences in Z score BB/U and Z score TB/U Before and After Intervention

T	kode	N	Mean	Std. Deviation	Std. Error	Mean	Std. Error	p
					Mean	Difference	Difference	
ZScore_BB1	Intervention	24	-.0800	.6156	.1257	-1.5500	.5144	0.334
	Control	24	11.029	2.2135	.4518	-1.5500	.5144	
ZScor_BB2	Intervention	24	9.475	1.1501	.2348	-1.5625	.4406	0.620
	Control	24	11.038	1.8268	.3729	-1.5625	.4406	
ZScore_PB1	Intervention	24	78.23	3.681	.751	-5.787	1.698	0.438
	Control	24	84.02	7.458	1.522	-5.787	1.698	
ZScore_PB2	Intervention	24	79.14	3.776	.771	-6.133	1.691	0.420
	Control	24	85.27	7.374	1.505	-6.133	1.691	

Table 7
Differences in Nutritional Status of BB/U and PB/U

	Mean	Standar Deviasi	Nilai P
Zscore BB/U1-Zscore BB/U2			
- Control	-0.0800	0.62	0.531
- Intervention	-0,425	0.59	0.731
Zscore TB/U1-Zscore TB/U2			
- Control	-0.49	0,95	0.616
- Intervention	0.04	0.59	0.018

DISCUSSION

Knowledge of Nutrition, Sanitation and IYCF Before and After Treatment in the Control and Treatment Group

The nutritional knowledge of respondents in the control group in the first measurement was an average of 58.54 ± 11.18 and in the second measurement it became 65.00 ± 15.86 , the results of statistical tests showed there was a significant difference with a p value of 0.006. Likewise in the treatment group in the first measurement obtained 54.79 ± 13.95 and the second measurement 70.00 ± 10.43 , the statistical test results showed there was a difference before and after in the treatment group with a p value of 0.0001. This shows that mentoring has an effect on increasing knowledge.

The results of the different test analysis showed that, although in absolute terms there was a difference in the average value of knowledge before and after the intervention, statistically there was no difference in knowledge of nutrition, sanitation and IYCF before and after the intervention in the initial measurement with p values (0.309, 0.991 and 0.915) and in the second measurement with p values (0.289, 0.150 and 0.753). This is possible because the education carried out is still ineffective, due to the limited number of visits to the respondent's house in the Covid 19 pandemic situation, so that education is only given at the beginning of the visit and then online through the WA group, but is only limited to the menu given by the mother to her child. Although educational booklets have been given to respondents, due to limited respondents, the level of education of respondents is low, namely not completing elementary school, completing elementary and junior high school by 75% in the treatment group and 79.7% in the control group. Likewise, respondents' income is still below the minimum wage, which is Rp. 2,432,000 for Pesawaran Regency, only reaching an average of 50%, there is a possibility that the funds provided are used for other purposes. Meanwhile, 100% of mothers' occupations were housewives in both the control and treatment groups. It

is possible that this caused the difference between the control and treatment groups after being given the intervention by being given leaflets and booklets.

Parenting is related to the family's ability to provide time, attention and support for children so that they can grow and develop optimally, both physically and mentally socially. These factors are closely related to the level of family knowledge and skills education. The higher the level of family resilience, the better the parenting pattern for children and families and the more they take advantage of existing health services. (Titisari et al., 2010). In addition, the nutritional status of toddlers is also influenced by mother's knowledge about nutritional adequacy, this is in accordance with previous research that mother's knowledge is related to the nutritional status of toddlers, the better the mother's knowledge about nutrition, the more normal the nutritional status of toddlers. This is because nutritional knowledge has a very important role. It is important in shaping the attitude of the mother and will have an impact on the behavior of the mother in providing nutrition for her toddler. (Sari & Cahyanto, 2019).

Tiara Rosania Hestuningtyas's research (2014) entitled *The Effect of Nutrition Counseling on Knowledge, Attitudes, Mother's Practices in Child Feeding, and Nutrient Intake of Stunting Children aged 1-2 Years in East Semarang District*, getting the results Nutrition counseling can increase knowledge, attitudes, mother's practice in child feeding, and child's nutrient intake significantly.

Respondents' knowledge about sanitation, in the control group in the first measurement the average was 87.21 ± 6.92 in the second measurement to 88.29 ± 6.19 , but statistically there was no significant difference with a p value of 0.669. While the treatment group in the first measurement obtained 87.00 ± 6.53 and the second measurement 90.00 ± 5.63 , the statistical test results showed no difference before and after mentoring with a p value of 0.208.

How much stunting could be prevented with improved WASH (Water Sanitation and Hygiene)? The recent Lancet

series on child and maternal malnutrition came to the conclusion that based on data in 34 countries where 90% of children are stunted, the global prevalence of stunting would be reduced by one fifth. This finding does not differ from other studies which show that stunting is impossible to eliminate without addressing the underlying causes of malnutrition along with deficiencies in the quantity and quality of nutritional intake of infants and children. The broad category of interventions that address the underlying issue referred to as 'nutrition sensitive' interventions include WASH but also such things as family planning services, maternal education and social safety nets. WASH has the potential to impact stunting through several biological and socioeconomic mechanisms that are difficult to assess independently. At the public, international and national policy level, interventions with the WASH approach and malnutrition are based on the basic question: how much stunting can be prevented globally with WASH? Various studies have estimated the magnitude of the disease caused by WASH over the last two decades (Cumming & Cairncross, 2016).

Mother's knowledge about PMBA in the control group in the first measurement was an average of 59.75 ± 13.29 and in the second measurement it became 65.50 ± 10.67 , but statistically there was no significant difference with a p value of 0.083. Meanwhile in the treatment group, the first measurement was 59.79 ± 12.14 and the second measurement was 70.88 ± 14.49 . The statistical test results showed that there was a difference before and after mentoring using boxlets and videos of complementary feeding with a p value of 0.001.

Balanced nutrition in toddlers has an important role in the toddler's diet. This is because in the principle of balanced nutrition there is an arrangement of daily food containing the type and amount according to the body's needs in order to maintain a normal weight to prevent nutritional problems. Giving a balanced diet at an early age will affect the appetite of the next child. The nutritional needs of toddlers will continue to increase as children get older. Nutritional intake in toddlers is used for the process of growth and development. However, if it exceeds the body's needs, it will cause overweight and other diseases caused by excess nutrients. Conversely, less nutritional intake than needed will cause the body to become thin and susceptible to disease.

The results of this study are not different from the results of the research by Marjan et al., (2019) with the research title Extension of Complementary Foods to Breastfeeding Mothers of Infants Age 6-24 Months at the Sukmajaya Health Center with the results of the research that the average score on the post test increased by 6.43 points, and statistically proven ($p < 0.05$). This shows that educational activities for mothers with babies aged 6-24 months are effectively carried out and increase maternal nutritional knowledge about giving appropriate complementary foods to prevent malnutrition in infants.

Mistry et al., (2019) concluded from their research that maternal nutritional counseling may be effective in reducing childhood stunting, along with improving maternal skills in optimal feeding practices in children under 5 years of age. So it is very necessary to empower health workers on the front lines to be trained to provide counseling to mothers about optimal child feeding practices and this can help reduce the prevalence of stunting.

Research by Phu et al., (2019) shows that the low knowledge of mothers about infant and child feeding greatly influences the occurrence of stunting, research in Myanmar shows that the practice of child feeding is the only variable that is accepted among all variables such as maternal

education, high mother, frequency of antenatal visits, child's birth weight and gestational age on the incidence of stunting. According to WHO feeding standards, three meals per day are acceptable for children between 6 and 8 months of age, whereas those between 9 and 23 months of age require more food. Most mothers believe that no food is suitable for sick children (6 months or older), except breast milk. WHO recommends mothers to feed their sick children softer, varied, appetizing and favorite foods and to feed them more than usual and encourage them to eat more. A review of surveys and research in South Asia shows that child feeding practices differ from optimal. Children from South Asia were fed less frequently, with low quality and quantity of complementary foods because their caregivers were believed to be anorexic. Infant and child feeding practices in Myanmar should be improved to meet the child feeding practice standards set by WHO. Mother's education level cannot predict her ability to feed her baby. This can be an input for local governments and related sectors to create programs that can increase the scope of infant feeding practices, especially exclusive breastfeeding and timely complementary feeding.

The results of the study by Kragel et al., (2020) show that food insecurity and a lack of dietary diversity still exist in this region and may have a negative impact on stunting rates. Although there are methodological limitations in studying nutritional intake, namely the reliability and willingness of participants' responses, efforts have been made to reduce the limitations in assessing dietary diversity and food frequency rather than caloric intake. It is possible that participants' responses to the survey questions had a social desirability bias. Nevertheless, this pilot study demonstrates that this method is feasible and can be applied to serve as an instrument for obtaining baseline data for assessing the appropriateness of public health interventions. Potential community intervention to improve diet.

In connection with the above results where community intervention has the potential to improve diet, so it is necessary to empower the community to increase their knowledge and skills in making additional food for pregnant women and toddlers.

Changes in weight and weight and nutritional status before and after intervention in the control and treatment groups

The results of the statistical test showed that there was a difference between BB in the control and treatment groups with a treatment value ($p = 0.005$) as well as BB in the second measurement with a p value of 0.001. For body length, there was a significant difference between the PB of the control group and the treatment group at the beginning ($p=0.002$) and the end (0.001).

According to the Child Anthropometry Standard (2020), children with PB/U and TB/U criteria are less than minus 2 standard deviations in the short category and children with a Z score of -3 standard deviations are included in the very short category. PB of children aged 20-22 months in 2-month intervals is 0.4 cm in boys and 0.6 cm in girls.

Previous research conducted by Aprina (2020) also proved that children were stunted and had a short birth length of 90%. Children who are not stunted and have a short birth length are 22.5%. Statistical test results obtained p-value 0, 000, meaning that it can be concluded that there is a relationship between birth length and stunting events. Body length at birth is an aspect of the risk of child stunting. Toddlers who were born with short birth length showed poor maternal nutritional consumption during pregnancy, so that the development of

the future child in the womb was not optimal and the results of statistical tests obtained p-value 0.210 with OR 0.444 (95% CI 0.122) - 1.617) means that it can be concluded that birth weight has a relationship with stunting events, this situation needs to be addressed early on considering that low birth weight is a public health problem that occurs in poor countries and grows closely related to mortality and morbidity. for future children, children or the next generation.

The results of this study are different from the research of Susanto et al., (2017) where supplementary feeding can improve the nutritional status of children in rural areas. So they hope that this feeding program should be implemented as a continuous program for the provision of better complementary feeding during the lactation period using locally provided food. The different results of this study may be due to the different intervention times where the intervention in this study was for 6 weeks while in our study it was only 4 weeks.

Ahmad et al., (2018) in their research entitled "Complementary feeding practices and nutritional status of children 6-23 months old: formative study in Aceh, Indonesia", the results show that there is a relationship between the consumption of diverse foods and infectious diseases with stunting and states that 6-23 months of age in the "first 1,000 days" of life. This period, called the window of opportunity, is an important stage for optimizing children's growth and development in preventing malnutrition including malnutrition, such as underweight and stunting, and its negative effects on adulthood.

Dhami et al., (2019) in their research entitled "Stunting and severe stunting among infants in India: the role of delayed introduction of complementary foods and community and household factors" show that delays in the introduction of complementary foods and related factors are associated with stunting and stunting. Severe cases occur in infants aged 6-8 months in India. For this reason, India takes nutrition policy actions by targeting mothers with low education/not finishing school and limited resources or low income. Based on this, it is necessary to follow up by training health workers in the village and cadres in order to increase knowledge and skills regarding infant and child feeding.

CONCLUSIONS AND SUGGESTIONS

There was no difference in nutritional knowledge in the control group who was given leaflets (p value = 0.006) and there was a difference in nutritional knowledge in the treatment group before and after the intervention (p value = 0.000). There was no difference in sanitation knowledge in the control group (p value = 0.208) and there was a difference in sanitation knowledge in the treatment group (p value = 0.669). There was no difference in IDD knowledge in the control group (p value = 0.083) and there was a difference in IYCF knowledge in the treatment group (p value = 0.001).

In the treatment group, there was no difference in body weight before and after the intervention with a p value of 0.97 and there was a difference in body length before and after the intervention with a p value of 0.000. In the control group, there was no difference in body weight before and after the intervention with a p value of 0.964 and there was a difference in body length before and after the intervention with a p value of 0.000.

There was no difference between the treatment and control groups for maternal knowledge about nutrition, sanitation and IDD at the initial measurement with p values

of 0.309, 0.991, 0.915. Likewise, the final measurement results with p values of 0.289, 0.150 and 0.753. There was no difference between the initial and final BW/U Z score with a p value of 0.731 and there was a difference in the TB/U Z score at the beginning and end with a p value of 0.018 in the treatment group. There was no difference in Z score BB/U at the beginning and end between the control and treatment groups with p-value 0.531 and there was no difference in Z-score TB/U at the beginning and end with p-value 0.616.

For local governments and related sectors to create programs that can increase the scope of infant feeding practices, especially exclusive breastfeeding and timely complementary feeding. The Puskesmas is expected to increase the collaboration of health workers such as midwives, health workers, nurses with puskesmas nutrition officers, in order to provide education about nutrition, sanitation and PMBA as well as parenting styles for children. to be able to improve abilities in the context of preventing stunting under five, starting from pregnancy.

ETHICAL CONSIDERATIONS

Funding Statement

The authors did not receive supporting funds from any organization for submitted articles

Conflict of Interest Statement

No potential conflicts of interest have been reported regarding the submitted articles

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