GEMAS APPLICATION ABOUT STUNTING PREVENTION FOR INCREASINGTHE KNOWLEDGE OF BREASTFEEDING MOTHERS

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ABSTRACT

Background: Stunting is a condition of failure to thrive due to chronic malnutrition, occurring since the baby is in the womb. Android smartphones as an effort to increase knowledge about stunting prevention of breastfeeding mothers.
Purpose: This study aims to determine the effect of giving the Gemas application on stunting prevention on the knowledge of breastfeeding mothers.
Methodology: Experimental research method with control group pretest and posttest design. Theresearch was carried out in the Community Health Center 2 Sokaraja area for 3 months in 2022. The population in this study were all breastfeeding mothers in the working area of Community Health Center 2 Sokaraja, Banyumas Regency, totaling 107 breastfeeding mothers as of February2022. The sample in this study were breastfeeding mothers, located in the working area Community Health Center 2 Sokaraja, has an Android-based smartphone and is willing to be a respondent. Total sample of 40 respondents divided into 20 intervention groups and 20 controls. Multi-stratified proportional random sampling technique. The questionnaire used to measure knowledge about stunting prevention, smart phones, and PPE sets (masks, hand sanitizers, gloves,face shields). Data analysis used paired t test (Paired-samples t test).
Findings: The average increase in knowledge of the control group was 2.9, which was smaller
than the intervention group's 4.3. Statistically, there is a difference in the increase in the value of knowledge about stunting prevention in respondents who are given the Gemas application and those who are not given the Gemas application ($0.003 < \alpha$ (0.05)). Statistically, there is a differencein the increase in the value of knowledge about stunting prevention in respondents who are giventhe Gemas application and those who are not given the Gemas application ($0.003 < \alpha$ (0.05)).
Limitation: Samples of study were only taken from one area of Public Health Centre. It could

bebetter if the samples of study were taken from some areas of Public Health Centre
Contribution: Therefore, the using of media that is based on smartphone can be used to increaseknowledge of breastfeeding mothers because it is more practical, easy to access and almost everyone currently has these devices.
Conclusion: The Gemas application about stunting prevention has a significant effect for increasing the knowledge of breastfeeding mothers.
***Keywords*:** Gemas application, stunting, knowledge, breastfeeding mothers.

1. Introduction

Stunting is malnutrition in infants in the first 1000 days of life that lasts a long time andcauses delays in brain development and child development. Due to chronic malnutrition, stuntedbabies grow shorter than the standard height for toddlers of their age. But remember, stunting mustbe short in stature, while those with short stature are not necessarily stunted (Kedeputian BidangAdvokasi, 2021). The condition of failure to thrive in children under five due to chronicmalnutrition, so that children are shorter than their age is called stunting. This malnutrition occurssince the baby is in the womb, so that it has an impact on children becoming sicker more easily,less cognitive abilities, and even in the long term it can cause economic losses," (Djauhari, 2017).

The condition of the mother who is malnourished can encourage the occurrence of babies with low birth weight. Pregnant women who experience CED will have a negative impact on themselves and the baby they are carrying. This is in line with Fajriana & Buanasita (2018) Chronic Energy Deficiency during pregnancy will result in Low Birth Weight Babies (LBW) where the baby's weight is <2500 g which will interfere with the growth and development of the child, premature babies, even to the point of sudden death of the mother or baby. This situation can lead to stunting.

In 2017, around 22.2% or 150.8 million toddlers in the world were stunted. More than half of the stunted toddlers in the world come from Asia, which is as much as 50%. Based on the resultsof a research study on the nutritional status of toddlers in Indonesia in 2019, the stunting rate has fallen to 27.67 percent (K. A. Ahmad et al., 2022). The stunting toddler rate in Central Java in 2017 (28.5%) has increased compared to 2014 (22.6%), 2015 (24.8%), as well as in Banyumas

Regency which has increased in 2017 (24.5%)) compared to 2014 (19.1%), and 2015 (22.8%) (Yankes DKK Banyumas Regency, 2019). Data from the Banyumas Regency Health Office in 2019 found 16,581 cases of stunting in Bayumas Regency and specifically in Purwokerto City there were 1,042 stunting cases (Suprianto, 2020). Banjarsari Kidul Village is 10 locus of stuntingvillages in Banyumas Regency in 2022 (Sadiyanto, 2021).

The causes of stunting in the stunting locus village in Pati Regency according to (Ernawati,2020) are: 1) lack of food intake; 2) inadequate parenting; 3) short descent; 4) not getting exclusive breastfeeding; 5) not getting Early Breastfeeding Initiation; 6) lack of environmental sanitation; 7)LBW; 8) during pregnancy women experience anemia. The results of other studies show that exclusive breastfeeding, birth weight, immunization, and parental income have a relationship withrisk factors for stunting (Setianingsih et al., 2022).

The results of previous research regarding the evaluation of the implementation of stunting prevention programs show that stunting prevention through specific nutrition intervention programs has not reduced stunting below 20% because, among other things, there is no specific funding for specific nutrition interventions (Muthia et al., 2020). The results of routine activities at Posyandu Desa Banjarsari Kidul which were carried out on February 13 2019 by distributing questionnaires to pregnant women, nursing mothers and mothers of toddlers to be filled in which contained stunting, the results obtained from 68 participants with an average of 56.67% regardingstunting . Thus it is necessary to increase knowledge to form positive attitudes in society as a wayto prevent stunting. This prevention can be in the form of providing health education using the media. The increasing use of smartphones gives the author the idea to create android-based media which can be downloaded in each respondent's smartphone . Android smartphones as an effort toincrease youth knowledge and attitudes about stunting prevention behavior. Education through digital applications is in accordance with the current generation, so it is expected to be able to reach many teenagers in a short time (Ahmad & Nurhidaya, 2020).

Based on a 2021 International Duta Comparation (IDC) survey, there are 80% of smartphoneusers during the first 15 minutes after waking up. Most of the use of smartphones in everyday lifeis just to play games and check social networks so that they are always

connected with other users(Rahmi, 2021). The Indonesian Central Bureau of Statistics (BPS) recorded cellular phone usage of around 62.84% or 355.62 million subscribers, an increase compared to 2010 of 38.05% (BPS, 2021). The use of the internet via smartphones in Indonesia is very high, reaching 167 million people (89%) of the total population of Indonesia (Kemenkominfo, 2021).

This application is a special android-based application that contains topics of discussion about stunting. One can read and study health information about stunting on the Smartphone. The use of smartphones as learning media is proven to increase knowledge. This is in accordance with research conducted by (Fitriami & Galaresa, 2022) that there is an effect of stunting education using the android application (p) 0.0001 <0.05 on increasing the knowledge and attitudes of mothers at the Tenayan Raya Pekanbaru Health Center. Learning media using Android-based Smartphones have proven to be of high quality based on research results that the TePytha application as an Android-based interactive learning media has received a positive response fromstudents and is practically used as a medium for learning mathematics (Artanti et al., 2022).

This study aims to analyze the effect of giving the Gemas application on stunting preventionon the knowledge of breastfeeding mothers. It is hoped that this research can increase the knowledge of breastfeeding mothers and avoid stunting and breastfeeding mothers for up to 2 years, so as to create a generation of golden children who are not stunted.

Treatment of stunting according to Sandjojo (2017) includes Specific Nutrition Interventions, and Sensitive Nutrition Interventions. Specific Nutrition Intervention is an intervention aimed at children in the first 1,000 Days of Life (HPK) and contributes to a 30% reduction in stunting. Specific nutritional intervention activities carried out include providing supplementary food to pregnant women to overcome chronic energy and protein deficiencies, addressing iron and folic acid deficiencies, overcoming iodine deficiency, and administering blood-boosting tablets to pregnant women (Hundoyo, 2018). Supporting interventions by providing calcium supplementation and pregnancy checks with the target of Breastfeeding Mothers and Children Aged 0-6 Months namely Encouraging early initiation of breastfeeding (jolong/colostrum breastfeeding), and Encouraging exclusive breastfeeding (breastfeeding

sufficient to reduce the risk of infant infection (Anisa, 2012)).3). Interventions targeting Breastfeeding Mothers and Children Aged 7-23 months are Encouraging the continuation of breastfeeding until the age of 23 months accompanied by complementary feeding, consuming milk as a good source of animal protein. Providing zinc supplementation, fortifying iron into food, and providing complete immunization. According to the Coordinating Ministry for Human Development and Culture- Secretariat of the Vice President of the Republic of Indonesia (2019) includes a) Promotion and counseling for exclusive breastfeeding b) Promotion and counseling for infant and child feeding (PMBA) c) Management of malnutrition d) Provision of additional food for recovery malnourished children e) Growth monitoring and promotion f) Providing vitamin A supplementation g) Providing nutritional powder supplementation, such as Taburia h) Providing immunization

The effects of stunting include the level of intelligence, susceptibility to disease, reducing productivity and then inhibiting economic growth, increasing poverty and inequality (RI Ministryof Finance, 2018). According to Sandjoyo (2017) the adverse effects of stunting are disruption of brain development, intelligence, impaired physical growth, metabolic disorders in the body, decreased cognitive ability and learning achievement, decreased immunity so that you get sick easily, and a high risk of developing diabetes, obesity, heart disease and blood vessels, cancer, stroke, and disability in old age. All of this will reduce the quality of Indonesia's human resources,productivity and competitiveness of the nation

According to Musfiqon (2012), health education cannot be separated from the media. Mediais divided into 2 parts, namely print and electronic media. Print media such as leaflets, booklets, posters and others. Electronic media such as television, radio, PowerPoint, smartphones and others(Maulana 2013). In this study, researchers used electronic media as a medium for distributing information. The media is media in the form of a smartphone application that contains topics around stunting prevention, such as understanding, causes or influencing factors, impacts and waysto prevent stunting. The application is named “Gemas (Golden Child Movement)”. Submission ofinformation media using applications is supported by research conducted by Purbasari (2013) thatthe delivery of information using smartphone media is very effective, especially among adolescents.

The Gemas Gadget application is available in the play store or app store. Everyone can download for free. The Golden Child Gadget application contains information about stunting including understanding, influencing factors, impacts, and treatment of stunting in breastfeeding mothers. The golden child gadget application is also accompanied by pictures to increase the knowledge of breastfeeding mothers regarding stunting prevention.

2. Literature review and hypotheses development

The use of smartphones as learning media is proven to increase knowledge. This is in accordance with research conducted by Fitriami & Galaresa (2022) that there is an effect of stunting education using the android application (p) 0.0001 <0.05 on increasing knowledge and attitudes of mothers at the Tenayan Raya Pekanbaru Health Center. Learning media using Android-based Smartphones have proven to be of high quality based on research results that the TePytha application as an Android-based interactive learning media has received a positive response from students and is practically used as a medium for learning mathematics (Artanti et al., 2022). The results of this study are similar to the results of research where there are significant differences in knowledge before and after being given the Mother Smart Grounding (MSG) program to mothers in preventing stunting in the Work Area of the Puuwatu Health Center, Kendari City (Andriani et al., 2020). The results of research conducted on cadres also found that the median % increase in knowledge of cadres about stunting before and after being given the ABS(Stunting-Free Children) application was 25.1% and there was a significant difference between knowledge before and after giving stunting-free children to the application cadres (p value <0.001)(Handayani et al., 2019). The results of other studies also found that education using whatsapp media showed an increase in knowledge of 84.6% and was greater than education using other methods such as lectures and booklets19 (Melati et al., 2021). The results of a similar study on theknowledge and attitudes of mothers and toddlers found that there was a significant average difference between the pre-test knowledge data and the post-test knowledge data for research respondents with the result p=0.001 (p<0.05) (Waisnawa et al., 2021).

The use of other applications to increase knowledge was found in the research by Sekarwatiet al. (2022) that there is an effect of the Android-based Ayo Dedis application on

increasing knowledge of balanced nutrition in pregnant women before and after application administration with results (p <0.05). Stunting education using the android application has an effect on increasingthe knowledge and attitudes of mothers at the Tenayan Raya Pekanbaru Health Center (p 0.000 1
<0.05) (Fitriami & Galaresa, 2022). According to Yuni et al. (2022) that the Smart Acceptor android car application can increase PUS women's knowledge about family planning. The media "Acenting Seni" is able to increase the knowledge and attitudes of respondents regarding preventing stunting from an early age (Medinawati et al., 2022). The use of the IMPORTANT ROLE Application has an effect on increasing the knowledge of cadres (Andayani et al., 2022). Gemas application can impact significantly the knowledge and attitude of teenagers in preventingstunting (Mulidah et al., 2022).

3. Research methodology

The research design used was an experimental with control group pretest and posttest design,with the research design consisting of an intervention group and a control group which carried outpretest and posttest (Nursalam, 2014). This research was carried out in the working area of Sokaraja 2 Public Health Center, Banyumas Regency because the Sokaraja 2 Health Center area is a stunting locus village in Banyumas Regency in 2022. The population is all breastfeeding mothers in the working area of Sokaraja 2 Health Center, Banyumas Regency in 2022. The sample in this study is breastfeeding mothers with research criteria of breastfeeding mothers, located in the working area of the Sokaraja 2 Public Health Center, have an Android-based Smartphone and are willing to be respondents. The sample consisted of 20 respondents in the intervention group and 20 in the control group, with a total sample of 40. The sampling technique used was random sampling. The research variables consisted of the independent variable which was the application of Gemas and the dependent variable which was knowledge, attitude towards preventing stunting in breastfeeding mothers. The instrument used was a questionnaire to measure stunting preventionknowledge and attitudes. The results of the validity and reliability test of the knowledge questionnaire with the Cronbach's alpha test. Making the "Gemas" application on Smartphones and making research ethics 0500/EA/KEPK/2022. The research was carried out

directly door to door, beginning with giving informed consent to the respondents. The intervention and control groups were given a knowledge and attitude questionnaire as a pretest. The intervention group wasgiven the Gemas application on a smartphone to study and read and an observation sheet for 7 days. The observation sheet contains the day and time the breastfeeding mother reads and understands the contents of the application. Day 8 given a knowledge questionnaire for the post test. The control group after the posttest was given the Gemas application. Bivariate analysis wasconducted to examine the relationship between the independent variables and the dependent variable. The normality test used is the Kolmogorov Smirnov to find out whether the research datais normally distributed or not. The statistical test used was the Paired-samples t test with the aim of knowing the difference in results between the pre-test post-test in the intervention group and the pre-test post-test in the control group. Meanwhile, the Independent-samples t test was used to identify differences in post-test knowledge in both the intervention and control groups (Dahlan, 2013).

4. Results and discussions

a. Results

1). The description of age, education, income, occupation and sex of the baby

Table 1. The frequency distribution of the description of age, education, income, occupation and sex of infants of breastfeeding mothers in the working area ofPuskesmas 2 Sokaraja, Banyumas Regency.

Variable	Control Group		Intervention Group	
	Frekuency(f)	Percentage (%)	Frekuency (f)	Percentage (%)
Age				
< 21 & > 35 tahun	4	20,0	3	15,0
21 - 35 tahun	16	80,0	17	85,0
Education				
Elementary	1	5,0	5	25,0
Yunior High School	5	25,0	6	30,0
Senior High School	11	55,0	7	35,0
University	3	15,0	2	10,0
Income				
< 2 Millions (Rupiah)	9	45,0	14	70,0
≥ 2 Millions (Rupiah)	11	55,0	6	30,0
Job				
Housewife	10	50,0	11	55,0
Employer	10	50,0	9	45,0
Gender of baby				
Male	9	45,0	9	45,0
Female	11	55,0	11	55,0

Based on table 1, it is known that in terms of age, most of the control group were breastfeeding mothers in the age category 21-35 years (80.0%), as well as in the intervention group, most were mothers in the age category 21-35 years (85 ,0%). Mother's education showed that most of the control group were breastfeeding mothers with a high school educational background (55.0%), as well as in the intervention group, most of them were mothers with a high school educational background (35.0%). Income showed that most of the control group were breastfeeding mothers with income ≥ 2 million (55.0%), while in the intervention group most weremothers with income < 2 million (70.0%). Occupation showed that in the control group 50.0% were housewives, while in the intervention group 55.0% were housewives. The sex of the baby showed that in both the control and intervention groups the majority (55.0% each) had babies withfemale sex.

Univariate analysis aims to describe the description of each variable studied in the form ofa frequency distribution. The description of univariate analysis in this study can be seen on table 2.

Table 2. The descriptions of mothers' knowledge before and after being given the Gemas application.

Variable	Groups			
	Control		Intervention	
	n	%	n	%
Pretest Knowledge				
Good	0	0	0	0
Enough	18	90,0	17	85,0
Not Enough	2	10,0	3	15,0
Posttest Knowledge				
Good	14	70,0	19	95,0
Enough	6	30,0	1	5,0
Not Enough	0	0	0	0

Based on table 2, it is known that when viewed from the mother's knowledge, in the controlgroup and the intervention group were almost the same, most of them had a good level of knowledge, namely (90.0%) and (85%). The level of knowledge after the intervention of giving the Gemas application, the intervention group was more than the control group, namely 95.0% and70%.

Bivariate analysis is an analysis conducted on two variables that are suspected to be relatedor correlated. Prior to analysis, the data was first tested for normality using the Kolmogorov Smirnov method. The results of the data normality test for the knowledge variable both before andafter giving the Gemas application can be seen in table 3 below:

Table 3. Normality test results

Variable	Kolmogorov-Smirnov Z	Asymp. Sig. (2-tailed)
Knowledge (Pretest)	1,279	0,076
Knowledge (Posttest)	1,145	0,145

Based on the results of the data normality test above, it can be seen that all research variables, both data before and after giving the Gemas application in both groups, have a significance value > the established significant level (α = 0.05), from this it can be concluded thatall data in each each research variable is normally distributed.

2). Differences in knowledge before and after being given the Gemas application

Comparison of knowledge about stunting prevention before and after the intervention in the control group in this analysis was carried out using the paired sample t test, which is to determine whether there is a difference in the value of knowledge before and after the interventionin the control group.

Table 4. Knowledge of stunting prevention before and after the intervention in the controlgroup

Category	Knowledge of stunting prevention Control Group			
	Pretest		Posttest	
	f	%	f	%
Good	-	-	14	70,0
Enough	18	90,0	6	30,0
Not Enough	2	10,0	-	-
Total	20	100,0	20	100,0

Based on table 4, it is known that in the control group, before the intervention most of therespondents had sufficient knowledge (90.0%), while after the intervention most of the respondents have good knowledge (70.0%).

Table 5. Results of the paired sample t test of knowledge about stunting prevention before and after intervention in the control group

Knowledge	Average	Deviation Standard	Average difference (pre – post)	Sig.
Pretest	13,3	1,1	2,95	0,000
Posttest	16,2	1,4		

The results of the calculation of the paired sample t test obtained the difference in the average value of knowledge before and after the intervention in the control group of 2.95. Beforethe intervention, the average value of the control group's knowledge was 13.3, the value increasedto 16.2, with a significance of 0.000 (significance <α (0.05)), so that it can be interpreted that statistically there is a difference in the value of knowledge before and after the intervention in thecontrol group.

The results of calculating the comparison of knowledge about stunting prevention before and after the intervention in the intervention group can be seen in the following table:

Table 6. Knowledge of stunting prevention before and after intervention in theintervention group

Category	Knowledge of stunting prevent Intervention Group			
	Pretest		Posttest	
	f	%	f	%
Good	-	-	19	95,0
Enough	17	85,0	1	5,0
Not Enough	3	15,0	-	-
Total	20	100,0	20	100,0

Based on table 8 it is known that in the intervention group, before the intervention was given most of the respondents had sufficient knowledge (85.0%), while after the intervention mostof the respondents had good knowledge (95.0%).

Table 7. Results of the paired sample t test of knowledge about stunting prevention before and after the intervention in the intervention group

Knowledge	Average	Deviation Standard	Average difference (pre – post)	Sig.
Pretest	13,1	1,4	4,35	0,000
Posttest	17,4	1,2		

The results of the calculation of the paired sample t test obtained the difference in the average value of knowledge before and after the intervention in the intervention group of 4.35. Before the intervention, the average knowledge value of the intervention group was 13.1, the valueincreased to 17.4, with a significance of 0.000 (significance <α (0.05)), so that it can be interpretedthat statistically there is a difference in the value of knowledge before and after the intervention inthe intervention group.

3). The effectiveness of the Gemas application for increasing knowledge.

To find out the effectiveness of the Gemas application in increasing knowledge about stunting prevention, an independent sample t test was carried out.

Table 8. The effectiveness of the Gemas application for increasing knowledge.

Knowledge	Average	Average difference	P value
Control Group	2,9	1,4	0,003
Intervention Group	4,3		

The results of the calculation of the independent sample t test obtained the difference in the average value of increasing the knowledge of the control group and the intervention group of 1.4. The average increase in knowledge in the control group was 2.9, which was smaller than the average increase in knowledge in the intervention group of 4.3.

The calculation results also obtained a significance value of 0.003 <α (0.05), so that it canbe interpreted that statistically there is a difference in the increase in the value of knowledge aboutstunting prevention in respondents who were given health education using the Gemas applicationand respondents who were not given education using the Gemas application. Where the respondents who were given health education using the Gemas application had a better increase in knowledge. So the hypothesis which states that there is a significant effect of the Gemas application on stunting prevention on the knowledge of breastfeeding mothers, is accepted.

b. Discussions

The characteristics of respondents who were breastfeeding mothers based on the age of the control group and the intervention group were almost the same for the most part in the 21-

35 yearage category, namely 80.0% and 85.0%. The results of this study are in line with previous research, that the characteristics of the mother's age in the study were found to be the majority of respondents,namely ages 21-30 years (Fitriami & Galaresa 2021). The research conducted entitled the relationship between maternal factors and the incidence of stunting shows that the maternal age factor does not have a significant relationship with stunting in toddlers. This is evidenced by the results of statistical tests in this study, the value of e was 0.419 ($p > 0.05$) (Kholia et al. 2020). The results of another study found that most of the respondents (56.2%) were aged 20 to 25 years and a small portion of the respondents (6.2%) were less than 19 years old (Andriani, Rezal & Nurzalmariah 2020). The age of pregnant women involved in this study was 20-30 years. With the majority aged 20-25 years (68.4%) (Waisnawa, Damayanti & Arimurti 2021).

Basic education (elementary and junior high) of breastfeeding mothers was found to be more in the intervention group than the control group, namely 55% and 30%. The results of this study are similar to research entitled risk factors for stunting in under-fives, in which 24 respondents (20.5%) have low-educated parents who have low education (Setianingsih, Kurniasari& Suyani 2022). In contrast to research on the relationship between maternal factors and the incidence of stunting, it was found that mothers with a higher education level were more likely tobe in the stunting case group, namely 14 people (53.84%) compared to mothers with low educationin both the case group and the control group of 4 people (15.38%) (Kholia et al. 2020). Mothers with high education usually work outside the home, so most of the children are with household assistants or are entrusted to grandmothers or other relatives. Parents or mothers should have the most role in forming children's eating habits, because it is the mother who prepares food, starts setting the menu, shopping, cooking, preparing food, and distributing food. This causes the motherto not be able to carry out her role optimally.

Respondents' income < 2 million was more in the intervention group than the control group,namely 70% and 45%. Stunted toddlers are more common in parents who have low incomes in 33 respondents (28.2%) with an odds ratio of 3.908 meaning that parents with low incomes are at riskof 3.908 times their child is stunted (Setianingsih, Kurniasari & Suyani, 2022).

The characteristics of work as housewives were almost the same between the control groupand the intervention group, namely 50.0% and 55.0%. The results of this study are different from previous research, that all of the respondents were mothers with jobs as housewives (IRT), namely32 mothers (100%) (Andriani, Rezal & Nurzalmariah, 2020).

Knowledge in the control group, before the intervention most of the respondents had sufficient knowledge (90.0%), and after the intervention most of the respondents had good knowledge (70.0%). respondents had sufficient knowledge (85.0%), and after the intervention most of the respondents had good knowledge (95.0%).

The results of the calculation of the independent sample t test obtained the difference in the average value of increasing the knowledge of the control group and the intervention group of

1.4. The average increase in knowledge in the control group was 2.9, which was smaller than the average increase in knowledge in the intervention group of 4.3. The calculation results also obtained a significance value of 0.003<α(0.05), so that it can be interpreted that statistically thereis a difference in the increase in the value of knowledge about stunting prevention for respondentswho were given health education using the Gemas application and respondents who were not giveneducation using the Gemas application.

The results of the calculation of the paired sample t test obtained the difference in the average value of knowledge before and after the intervention in the intervention group of 4.35. Before the intervention, the average knowledge value of the intervention group was 13.1, the valueincreased to 17.4, with a significance of 0.000 (significance <α (0.05)), so that it can be interpretedthat statistically there is a difference in the value of knowledge before and after the intervention inthe intervention group.

The results of this study are similar to the results of research where there are significant differences in knowledge before and after being given the Mother Smart Grounding (MSG) program to mothers in preventing stunting in the Work Area of the Puuwatu Health Center, Kendari City (Andriani, Rezal & Nurzalmariah 2020). The results of research conducted on cadresalso found that the median % increase in knowledge of cadres about stunting before and after beinggiven the ABS (Stunting-Free Children) application

was 25.1% and there was a significant difference between knowledge before and after giving stunting-free children to the application. cadres (p value <0.001) (Handayani et al., 2019). The results of other studies also found that education using Whats App media showed an increase in knowledge of 84.6% and was greater than education using other methods such as lectures and booklets19 (Melati et al., 2021). The results of a similar study on knowledge and attitudes in mothers and toddlers found that there wasa significant average difference between pre-test knowledge data and post-test knowledge data inresearch respondents with the result p = 0.001 (p <0.05) (Waisnawa et al., 2021).

5. Conclusion

The Gemas application about stunting prevention has a significant effect for increasing theknowledge of breastfeeding mothers.

Limitation and study forward

Samples of study were only taken from one area of Public Health Centre. It could be better if the samples of study were taken from some areas of Public Health Centre

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