# Increasing Eligible Women Knowledge As Primary Preventive Of Stunting

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#### **Abstract**

Stunting is a chronic malnutrition problem caused by insufficient nutritional intake for a long time due to the provision of food that is not appropriate with nutritional needs. The effort to provide health education is an important effort to increase the knowledge of eligible women about stunting prevention. The purpose of this study was to determine the effect of health education on stunting prevention on the knowledge of eligible women in Kediri Regency. This study was Pre Experimental Research with One Group Pre Test-Post Test Design. 476 respondents joining this research was obtained by Accidental Sampling technique. Data collection was collected by a questionnaire. Collected data was analyzed by the Wilcoxon signed-rank test to analyze the effect of Health Education Leaflet media on increasing the knowledge of eliglible women in Kediri Regency. The Wilcoxon signed-rank test result showed pvalue= 0.000, which means p <  $\alpha$  ( $\alpha$  = 0.05). It can be inferred that health education about stunting prevention influencing eligible women knowledge in Kediri Regency. Government need to improve eligible women knowledge as the primary preventive of stunting in order to decrease stunting level prevalencies.

Keyword: Stunting Prevention, Knowledge, Eligible Women.

### Introduction

Eligible Women are a group of women who need special attention regarding their health status, especially their nutritional status. The quality of the next generation will be determined by the condition of the mother before pregnancy and during pregnancy. It is very important to pay attention to

preconceptional health, including nutritional status in an effort to prepare for pregnancy. Pregnant women who experience malnutrition will be at risk of having stunted children 7 times, 11 times underweight children and 12 times wasted children compared to pregnant women with good nutritional status<sup>1</sup>.

Stunting is a chronic malnutrition problem caused by insufficient nutritional intake for a long time due to the provision of food that is not in accordance with nutritional needs. Stunting occured when the fetus is still in the womb and appears when the child is two years old. Stunted children need to managed with "catch-up growth", otherwise it will end up with growth decreasement. Stunting seems to be associated with an increased risk of morbidity, mortality and obstacles to growth both motoric and mental<sup>2</sup>.

Stunting is one of the targets of the Sustainable Development Goals (SDGs) which includes the 2nd sustainable development goal, which is eliminating hunger and all forms of malnutrition by 2030 and achieving food security. The target set is to reduce the stunting rate by 40% by 2025<sup>3</sup>. The prevalence of stunting in the world has decreased, although it is still below the WHO standard. There are 20.1% of children under two years old in Indonesia who were in stunting condition. Mothers with an educational background of primary school or under showed more possibility 1.587 times than mothers with a college-educated background to have stunted children under two years (95% CI 1.576-1.598). Mean while, mothers with an educational background of Junior High School showed 1.430 times more likely than college-educated mother (95% CI 1.420-1.440). Moreover, mothers with education background of Senior High School have 1.230 times more possibilty to have stunted children than mothers with a collegeeducated background (95% CI 1.222-1.238)4.

The percentage of short toddlers in Indonesia in 2018 was 19.3% and 11.5% of very short toddlers. Data in East Java, the number of short toddlers shows an increasing trend from 2016 to 2018, which is increased from 18.62% to 19.9%<sup>5</sup>. East Java is a province that take place in 11th ranks of the highest proportion of stunting in Indonesia. According to the Kediri District Health Office, the prevalence of stunting data for 2020 is 14.39%. In 2021 the number of stunting cases in Kediri Regency increased to 14.1%. Whereas in 2022 August the number of stunting cases in Kediri Regency was 10.26%<sup>6</sup>. According to data from the Kediri District Health Office, it was reported that the highest number of stunting cases were at the Bendo Health Center, amounting to 15.27%. Plosoklaten

Community Health Centers amounted to 13.73%. Bangsongan Health Center 13.64%, Puncu health center 13.46%, Kepung Health Center 13.06%<sup>7</sup>.

According to experts, stunting is caused by multidimensional factors and not only caused by malnutrition which is experienced by pregnant women and children under five years old. The most decisive intervention to reduce the prevalence of stunting therefore needs to be carried out in the first 1000 days of life in children under five years old. In more detail, several factors cause stunting such as poor parenting, limited quality ANC and PNC health services, lack of nutritious food, lack of access to clean water and sanitation<sup>8</sup>.

During the "golden period", the critical period, the "window of opportunity" at this time there are several adverse effects that can be caused by nutritional problems, namely in the long term and short term. In the short term it can lead to disruption of brain development, intelligence, physical development disorders and body metabolism. Meanwhile, in the long term, the consequences that can be caused are decreased cognitive ability and learning achievement, decreased immunity so that it is easy to get sick, and a high risk of developing chronic diseases and disabilities in old age, as well as quality that is not competitive which results in low economic productivity<sup>9</sup>.

Based on the initial study conducted by the researchers, it was found that at the Bendo Community Health Center, there are 50 eligible women, which 45 of them said that they did not know about stunting prevention due to their low education. Meanwhile, the other 5 said that they had little understanding of stunting prevention due to routine consultations at the Public Health Center and often reading information from social media.

Several researchers have stated that health education can increase knowledge, attitudes and skills including research conducted by Anny in 2012, concerning "The Influence of Health Education About Preconception Nutrition on the Level of Knowledge, Attitudes, and Healthy Food Consumption Practices of Premarital Women" through counseling using treatment groups and control, in the treatment group, after the intervention there was an increase in knowledge of 24.2% compared to the non-intervention group which increased only by 6.1% and the number of respondents who experienced a change/increase in attitude after the intervention statistically was 36.4%.

Early efforts to prevent stunting must be carried out so that the eligible women will be able for preparing their pregnancy, in order to prepare the child's first 1000 days of life (PHK) properly. In order to prevent stunting, it is necessary for mothers to improve their nutritional status during pregnancy. During this time, nutritional improvement has been given for pregnant mother, but it will be better if nutritional education also given to mothers even they are not in pregnancy condition in order to prevent stunting. Nutritional education gives mother knowledge which can be useful for preparing their pregnancy later<sup>10</sup>.

Health education can be possibility ways for increasing knowledge and awareness of the attitudes and actions of a mother in choosing healthy food for toddlers. Health education is an intervention on behavior as a determinant of health or public health. In general, health education aims to develop individual, group or community behavior so that they lead healthy lives<sup>11</sup>.

Based on the description above, we were interested in conducting research on stunting in the Kediri Regency Region. Stunting prevalency is still on a high level nowadays and still being a problem topic for eligible women. Therefore, the eligible women need to receive health education to prevent stunting and reduce the prevalence of stunting in the Kediri region.

#### Methodology

This research was Pre-Experimental research with the Pre Test-Post Test With One Group Designs. The first observation (pre test) is carried out which allows testing the changes that occur after the treatment or experiment (post test). All respondents were given health education about stunting, before the treatment they were given a pre-test and after the treatment they were given a post-test. This research was aim to determine the effect of Health Education on Stunting Prevention The Eligible Women Knowledge in the Kediri District.

There was 476 respondents with the inclusion criteria of eligible women which following this criteria: aged 20-30 years, had just planned a pregnancy program, had been on their first pregnancy who came when the online research was carried out. The sampling technique in this study used a non-probability technique, namely purposive sampling. The instrument in this study consisted of 26 questions that were tested for validity and reliability with a Cronbach's alpha value of 0.829 (> 0.361).

#### Result

Respondents General Characteristics

**Table 1 Respondents General Characteristics** 

Indicator	Cathegories	Frequency	%
Age	17-25	388	81.5
	26-35	88	18.5
<b>Educational Level</b>	Elementary School	16	3.4
	Junior High School	20	4.3
	Senior High School	412	86.5
	Diploma	12	2.5
	Bachelor Degree	16	3.3
<b>Employment Type</b>	Housewife	36	7.6
	Enterpriser	256	53.7
	Official	8	1.7
	Private Employees	132	27.7
	Other employment	44	9.3

Based on the results of the study, it was found that general data on the characteristics of respondents for the age of the majority 17-25 years amounted to 81.5%, the education level of the majority was high school, that is 86.5%, while the majority of jobs were self-employed, that is 53%.

# **Bivariate Analysis Results**

Knowledge before The Health Education Given

**Table 2 Knowledge before The Health Education** 

Knowledge	Frequency	%
Good	4	0.8
Moderate	12	2.5
Poor	460	96.7

Based on the table above, it can be concluded that out of 476 respondents, before being given health education about stunting prevention using leaflets, there were 460 (96.7%) of eligible women who had Poor Knowledge and 12 (2.5%) of eligible women had Moderate Knowledge. There are only 4 of them who had the Good Knowledge (0.8%).

Knowledge After The Health Education Given

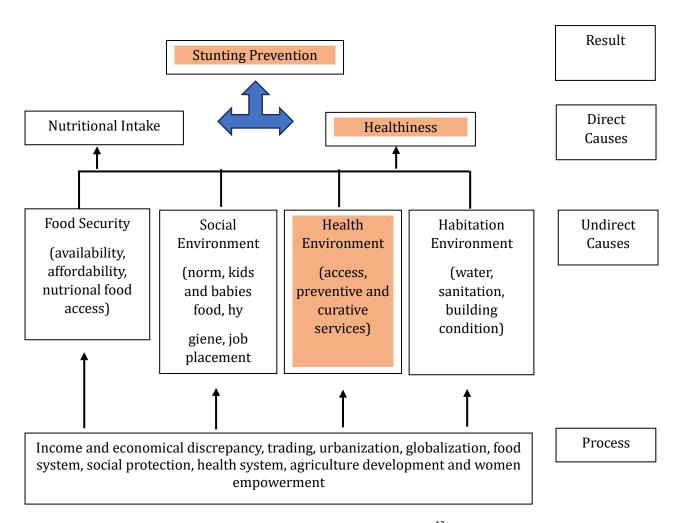
**Table 3 Knowledge After The Health Education** 

Knowledge	Frequency	%
Good	448	94.11
Moderate	24	5.04
Poor	4	0.85

Based on the table above regarding the frequency distribution of changes in knowledge after being given health education about stunting prevention through leaflets, it was found that 448 (94.11%) respondents had Good Knowledge, 24 (5.04%) respondents had Moderate Knowledge, and 4 (0.85%) respondents had Poor Knowledge.

From the wilcoxon signed-rank test result, which is 0.000, which means p  $<\alpha$  ( $\alpha$  = 0.05). So it can be concluded that there is an influence of health education about stunting prevention on knowledge of eligible women in the Kediri district.

In reducing the prevalence of stunting, researchers have supported the UNICEF program, which is improving health status with preventive measures as shown below:



Source UNICEF 1997; IFPRI 2016; BAPPENAS 2018<sup>12</sup>

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Based on the picture above, the colored part shows the researcher effort for decreasing stunting by preventive ways. This effort was carried out with a strategy to change people's behavior in terms of food consumption patterns, antenatal care, maternal nutrition before and after pregnancy, and exclusive breastfeeding of eligible women in order to reduce the prevalence of stunting.

## Discussion

The results of the wilcoxon signed-rank test showed the significant knowledge improvement which is 0.000. From these results it can be concluded that there are improvement eligible women by giving them a health education at Bendo Community Health Center, Kediri Regency. This is in accordance with Syntia's research (2021)<sup>13</sup> which shows that there is an effect of education using media posters via WhatsApp groups on mothers' knowledge about stunting at the Bengkulu City Decline Health Center. This research is supported by research conducted which states that there is a significant difference in knowledge between before and after being given a health education intervention with a difference of 12.0%, which means that there is an effect of health education on the level of knowledge of pregnant women about preventing stunting.

The use of appropriate media also support the delivery of the health education process. In this case leaflets are media that are effectively used because they have the advantage of being a concise and practical design that is able to attract someone's interest in learning<sup>14</sup>. The use of WhatsApp groups also has a positive effect on knowledge about stunting prevention when accessing online social support. This online social support is complementary or complements the support they already get offline. The results of this study are in accordance with Notoatmodjo's theory (2012 in Sukari, 2019) which says that education can influence one's knowledge which underlies one's attitudes and behavior, especially in health maintenance. Education has a positive impact on health awareness directly. So it is expected that the eligible women with better educational level background will have a better level of knowledge about stunting prevention too.

Good knowledge of the eligible women is one way to anticipate health problems. Lack of knowledge about stunting prevention will have a negative impact on planning a pregnancy until after safe delivery later<sup>15</sup>, According to Notoatmodjo (2012 in Sukari, 2019), revealing behavior that is based on

knowledge will be more lasting than behavior that is not based on knowledge. From the data explained above, the researchers argue that the knowledge of the eligible women before being given an intervention in the form of health education about stunting obtained a pre-test value of 1.04%, whereas after being given an intervention in the form of health education about stunting a post-test value of 2.93% was obtained. So there was an increase of 1.89%, regarding the knowledge of women of childbearing age after being given health education interventions about stunting prevention. The results of the Wilcoxon test also show a p-value (sig <0.05), namely the significance value of knowledge, which is 0.000, so from these results it means that H1 is accepted and H0 is rejected, namely that there is an influence of Health Education on Stunting Prevention on Knowledge of the Eligible women in the District of Kediri.

#### Conclusion

Based on the research results, the following conclusions can be drawn:

After being given Health Education that there is an increase in knowledge of the eligible women with the majority having higher education which will facilitate the absorption of information, so that with sufficient education a person will be willing and able to behave well in efforts to prevent stun.

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## **Conflict of interest**

The author declare that no conflict of interest.

## **Bibliography**

- Titaley, C.R, Ariawan, I, Dwi Hapsari, Muasyaroh, A, and Dibley, M.J, "Determinants of the Stunting of Children Under Two Years Old in Indonesia: A Multilevel Analysis of the 2013 Indonesia Basic Health Survey", Nutrients, 11 vol 5 (2019), pp.1106, doi: 10.3390/nu11051106.
- Soliman. A, Sanctis, V.D, Alaaraj. N, Ahmed. S, Alyafei. F, Hamed. N, and Soliman.N, "Early and Long-term Consequences of Nutritional Stunting: From Childhood to Adulthood", Acta Biomed, 92 vol 1 (2021). doi: 10.23750/abm.v92i1.11346

- ISSN: 2197-5523 (online)
- Minister of Health of the Republic of Indonesia (Kemenkes RI) of 2018
- Laksono. A.D, "Stunting among children under two years in Indonesia: Does maternal education matter?. PLoS One. 17 vol 7 (2022). doi: 10.1371/journal.pone.0271509
- 5. Central Bureau of Statistics (BPS). 2018
- Kediri District Health Office (DINKES Kabupaten Kediri).
  Researcher Primary Data. 2021
- Kediri District Health Office (DINKES Kabupaten Kediri).
  Researcher Primary Data. 2022
- 8. Gebreayohanes. M, and Dessie. A, "Prevalence of stunting and its associated factors among children 6–59 months of age in pastoralist community, Northeast Ethiopia: A community-based cross-sectional study". PLoS One. 17 vol 2 (2022). doi: 10.1371/journal.pone.0256722
- 9. Information and data center of health ministry of RI. 2016
- 10. Health Ministry of RI, 2018
- Kumar. S, and Preetha. GS, "Health Promotion: An Effective Tool for Global Health". Indian J Community Med. 37 vol 1 (2012). doi: 10.4103/0970-0218.94009
- 12. UNICEF 1997; IFPRI 2016; BAPPENAS 2018
- 13. Syntia, Y. (2021). The Effect of Education with Media Poster Through the Whatsapp group on Mothers' Knowledge and Attitudes About Stunting at Penurunan Public Health Center, Bengkulu. Pengaruh Edukasi Dengan Media Poster Melalui Whatsaap Group Terhadap Pengetahuan Dan Sikap Ibu Tentang Stunting Di Puskesmas Penurunan Kota Bengkulu. Skripsi. Politeknik Kesehatan Kemenkes Bengkulu.
- Hasanica.N, Catak. A.R, Mujezinovic. A,
  Begagic.S, Galijasevic.K, and Oruc,M. "The Effectiveness of Leaflets and Posters as a Health Education Method". Mater Sociomed. 32 vol 2 (2020). doi: 10.5455/msm.2020.32.135-139
- 15. Yulianie.R, "The Stunting Prevention Through Increasing Knowledge of Pregnant Women And Kader". Jurnal Pengabdian Pada Masyarakat Indonesia. Vol 2 No 2 (2023)