



## **Training Effectiveness On Dasa Wisma Activist's Knowledge Of Stunting And Prevention In The Working Area Of Lebdosari Community Health Centers In Semarang City**

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### **Abstract**

*Malnutrition in Semarang City in 2015 was found as many as 39 cases with a prevalence according to BB / U over nutrition (4.36%), malnutrition (0.40%), under nutrition (3.54%) has increased. Whereas in 2014 there were 32 with the prevalence according to weight loss (4.75%), malnutrition (0.38%), malnutrition (2.73%) cases. This study aims to determine the effectiveness of training on knowledge dasa wisma activist regarding stunting in the work area of the Lebdosari puskesmas in the city of Semarang. This type of research is a quantitative study with a quasi-experimental design with one group pretest-posttest without control. The population of this study is the activist dasa wisma in the work area of Lebdosari Health Center in the city of Semarang totaling 30*

*people. The sampling technique used total sampling technique. Data collection used a questionnaire about stunting knowledge. Bivariate data analysis was performed using the Wilcoxon test. The results showed that the mean difference in knowledge 2 months after training and knowledge 1 month after training was 1.3. The Z value is -2.00 with a significance of 0.046, so it can be concluded that there is a significant difference in knowledge 2 months after training and knowledge 1 month after training. The recommendation of this research is for puskesmas to issue policies or programs for empowering cadres of dasa wisma in the form of health training, especially about stunting so that it can increase knowledge about stunting.*

**Keywords:** training, knowledge, stunting

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## Introduction

Stunting is one of the nutritional problems that occur in Indonesia.(1) This condition is presented with a z-score of height for age (height / age) less than -2 standard deviation (SD) based on WHO growth standards.(2) Problems public health is considered severe if the prevalence of stunting is 30–39% and serious if the prevalence of stunting is  $\geq 40\%$ .(3)

Stunting describes the status of chronic malnutrition in society during the period of growth and development since early life. UNICEF in 2013 recorded that about 1 in 4 children under five in the world are stunted.(4) The results of Riskesdas regarding stunting rates found that 37.2% of children under five in Indonesia are stunted, with details of 17.9% of children being short and 19.3% very short. Central Java Province is a stunting rate of 28% in Indonesia, meanwhile based on data from the Semarang City Health Office, it is stated that the results of Nutrition Status Monitoring based on the PB / U or TB / U indicators, the incidence of stunting in Semarang City is 17%.(5)

The problem of stunting in toddlers can hinder children's development as well as other negative impacts such as intellectual decline, susceptibility to non-communicable diseases, decreased productivity, causing poverty and the risk of giving birth to babies with low birth weight.(6)(2) In 2018, there were as many cases of malnutrition as found 14 cases in Semarang City.(5) The research shows that children who are stunted during infancy will have a high risk of having low cognitive levels, poor learning and psychosocial achievement.(7) The nutritional status of pregnant women greatly affects the state of health and fetal development. Another factor associated with stunting is exclusive breastfeeding for children under five. Toddlers who do not receive exclusive breastfeeding for 6 months have a high risk of stunting.(8)

Early detection and intervention of stunting is an effort to improve the quality of children and is one of the programs of the Indonesian Ministry of Health. Monitoring and early detection of early childhood stunting is part of the responsibility of health center health workers in collaboration with posyandu cadres in their respective working areas. Lack of training and coaching to improve adequate skills for cadres causes a lack of understanding of cadres' duties.(9)



Monitoring the growth of children under five in posyandu is a very strategic effort to detect early growth disorders. Early prevention is one of the best ways to reduce the prevalence of stunting in Central Java. The most important procedure for early detection and prevention of stunting are routine screening and persistent follow-up of toddler height. The posyandu program made by the government is very good and is a solution to monitoring the health of all levels of society. The routine screening process for height / age should become a mandatory agenda in every activity carried out at the posyandu.(10)

Dasawisma as the smallest group of PKK groups has a strategic role to create a prosperous family, especially in the health sector. The existence of dasawisma will facilitate coordination and networking, so that PKK programs and those involving PKK can run right on target. Empowerment of cadres who are members of the dasa wisma group is a strategy used to increase the ability and realize the independence of cadres in carrying out their roles and functions in community health development. The cadres are also expected to be able to provide continuous good reporting of case findings in the community to the community health center, so that the case findings can be immediately handled and it is hoped that an improvement in the health status of children can be achieved.(11)

One of the external factors that can influence knowledge related to malnutrition in children under five is the cadres' exposure to information related to nutrition on toddler growth and development. Information related to nutrition in children under five can be obtained by cadres, one of which is from counseling and training. Cadre training related to nutrition for children under five will increase cadres' knowledge about malnutrition, where the knowledge category prior to training is in the lack of knowledge. Cadre training related to nutrition for toddlers has a positive impact on the ability of cadres to carry out proper screening regarding the nutritional needs of toddlers.(12) Providing information will increase knowledge so that it can raise awareness and ultimately produce ways of thinking according to this knowledge so that there is a change in behavior accordingly with the knowledge they have.(13)

Based on the results of a preliminary study conducted on January 1-14, 2020, data from the Semarang City Health Office stated that the results of Nutritional Status Monitoring based on the PB / U or TB / U indicators, the incidence of stunting in the city of Semarang was 17%. In the city of Semarang, there were 39 cases of malnutrition in 2015 with a prevalence according



to BB / U over nutrition (4.36%), malnutrition (0.40%), under nutrition (3.54%) had increased. Whereas in 2014 there were 32 with the prevalence according to weight loss (4.75%), malnutrition (0.38%), malnutrition (2.73%) cases. Data from Puskesmas Lebdosari in 2018 found 118 children who were malnourished based on the PB / U indicator with 16.1% experiencing malnutrition. whereas in 2019 there were 77 children who experienced malnutrition based on the PB / U indicator with 18.18% experiencing malnutrition. This study aims to determine the effectiveness of training on the knowledge of dasa wisma activists about stunting in the work area of Lebdosari Community Health Center in the city of Semarang.

### Research methods

The variables of this study consisted of independent variables (training on stunting at dasa wisma activists), dependent variables (knowledge of dasa wisma activists about stunting and its prevention) and confounding variables (level of education and exposure to other information media). The type of research used in this research is quantitative research with a quasi-experimental design with one group pretest-posttest without control. The sampling technique uses a total sampling technique. Data collection used a questionnaire about stunting knowledge. Bivariate data analysis was performed using the Wilcoxon test.

### Result

Table 1 shows that the lowest age of the respondents is 27 years, the highest age is 53 years and the average age of the respondents is 39.8 years with a standard deviation of 5.626.

Table 1. Characteristics of Respondents by Age

| Characteristics | Minimum  | Maximum  | Mean $\pm$ SD    |
|-----------------|----------|----------|------------------|
| age             | 27 years | 53 years | 39,8 $\pm$ 5,626 |

Table 2. shows that the most respondents have high school education, namely 18 people (60%) and the least educated SD is 1 person (3.3%).

Table 2. Frequency Distribution of Respondent Characteristics by Education Level

| No. | Education Level | Frequency (f) | Prosentage (%) |
|-----|-----------------|---------------|----------------|
|-----|-----------------|---------------|----------------|



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|    |       |    |       |
|----|-------|----|-------|
| 1. | SD    | 1  | 3,3   |
| 2. | SMP   | 9  | 30,0  |
| 3. | SMA   | 18 | 60,0  |
| 4. | PT    | 2  | 6,7   |
|    | Total | 30 | 100,0 |

Table 3. shows that the respondents who have the most family income of 1-2 million are 21 people (70%) and the least have a family income of less than 1 million, namely 2 people (6.7%).

Table 3. Frequency Distribution of Respondent Characteristics Based on Income

| No. | Income      | Frequency<br>(f) | Prosentage<br>(%) |
|-----|-------------|------------------|-------------------|
| 1.  | < 1 million | 2                | 6,7               |
| 2.  | 1-2 million | 21               | 70,0              |
| 3.  | 3-4 million | 7                | 23,3              |
|     | Total       | 30               | 100,0             |

Table 4. shows that the respondents who get the most information about stunting from electronic media are 23 people (76.7%) and the least get information about stunting from people other than health workers, namely 3 people (10%).

Table 4. Frequency Distribution of Respondent Characteristics Based on Information Sources

| No. | Information<br>Sources              | f  | %     |
|-----|-------------------------------------|----|-------|
| 1.  | Print media                         | 4  | 13,3  |
| 2.  | Electronic media                    | 23 | 76,7  |
| 3.  | Anyone other than<br>health workers | 3  | 10,0  |
|     | Total                               | 30 | 100,0 |

Level of knowledge about stunting before and after training Table 5. shows that the respondents' knowledge of stunting before the lowest was 9, the highest was 17 and the average was 11.63 with a standard deviation of 1.973. The lowest knowledge of respondents about stunting 1 month after training was 11, the highest was 19 and the average was 15 with a standard deviation of 2.7. The lowest knowledge of respondents about stunting 2 months after



stunting training was 12, the highest was 20 and the average was 16.5 with a standard deviation of 2.3. The lowest knowledge of respondents about stunting 3 months after stunting training was 15, the highest was 20, and the average was 18.867 with a standard deviation of 1.33.

Table 5. Respondents' level of knowledge about stunting before and after training

|                                   | Min   | Max   | Mean $\pm$ SD         |
|-----------------------------------|-------|-------|-----------------------|
| knowledge before training         | 9,00  | 17,00 | 11,6333 $\pm$ 1,97368 |
| knowledge 1 month after training  | 11,00 | 19,00 | 15,2000 $\pm$ 2,73420 |
| knowledge 2 months after training | 12,00 | 20,00 | 16,5000 $\pm$ 2,37443 |
| knowledge 3 months after training | 15,00 | 20,00 | 18,8667 $\pm$ 1,33218 |

Table 6 shows the results of the Wilcoxon test where the average difference in knowledge 2 months after training and knowledge before training is 4.87. The Z value is -4,291 with a significance of 0,000, so it can be concluded that there is a significant difference in knowledge 2 months after training and knowledge before training. Wilcoxon test results obtained an average difference of knowledge 3 months after training and knowledge before training of 7,237. The Z value is -4,850 with a significance of 0,000, so it can be concluded that there is a significant difference in knowledge 3 months after training and knowledge before training. Wilcoxon test results obtained an average difference of knowledge 2 months after training and knowledge 1 month after training of 1.3. The Z value is -2.00 with a significance of 0.046, so it can be concluded that there is a significant difference in knowledge 2 months after training and knowledge 1 month after training.

Tabel 6. Wilcoxon Test Results

|               | knowledge 2<br>months after<br>training -<br>knowledge before<br>training | knowledge 3<br>months after<br>training -<br>knowledge<br>before training | knowledge 2<br>months after<br>training -<br>knowledge 1 month<br>after training |
|---------------|---------------------------------------------------------------------------|---------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Mean<br>diff. | 4,87                                                                      | 7,237                                                                     | 1,3                                                                              |
| Z             | -4.291 <sup>a</sup>                                                       | -4.850 <sup>a</sup>                                                       | -2.000 <sup>a</sup>                                                              |




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|   |      |      |      |
|---|------|------|------|
| p | .000 | .000 | .046 |
|---|------|------|------|

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## Discussion

The results showed that the respondents' knowledge about stunting before the lowest was 9, the highest was 17 and the average was 11.63 with a standard deviation of 1.973 as shown in table 5. These results illustrate that before the training, the knowledge of dasa wisma cadres about stunting was still classified as medium with an average of 11.63 of the 20 questions on the questionnaire. The results of this study are consistent with research which states that 39% of cadres have good knowledge, 54.2% of cadres have sufficient knowledge and 6.8% of cadres have insufficient knowledge about early detection of malnutrition.<sup>(11)</sup>

The knowledge of respondents who are classified as medium (moderate) can be caused by the level of education of the respondents, most of whom have high school education, namely 60%. The level of education affects a person's ability to understand the information they receive, including information about stunting. The higher a person's education level, the better his ability to understand or absorb information.<sup>(14)</sup>

The level of education also determines whether it is easy for a person to absorb and understand the knowledge obtained. In general, the higher a person's education, the better his knowledge is. The level of education affects a person's perception to be more accepting of new ideas and technology. Education can make it easier for someone to make decisions and act. Education in general is any effort that is planned to influence other people, be it individuals, groups or communities so that they do what the actors of education expect. Education is a learning phase which means that education occurs in a process of growth, development or change towards a more mature and more mature individual, group or community. Education is the last formal level of education that a person has ever attended.<sup>(14)</sup>

Moderate knowledge about stunting has an impact on early detection of stunting and prevention of stunting in infants. This is because the level of knowledge affects a person's attitude and behavior. Research states that knowledge has a major influence on the occurrence



of changes in a person's attitude and behavior.<sup>(15)</sup> In this case, Notoatmodjo states that knowledge is a domain factor that affects a person's behavior, where a person will behave according to the knowledge he has.<sup>(14)</sup>

The impact that can be caused by the relatively moderate knowledge about stunting is the occurrence of malnutrition which is too late to be detected and prevented. Malnutrition is one of the classifications of nutritional status where humans experience malnutrition which is known based on anthropometric measurements such as weight gain, height / body length, head circumference, arm circumference and others. To overcome this condition, it is necessary to empower the vanguard who provide health services to the community, namely the *dasa wisma* cadres. If cadres can carry out their roles and functions properly, in this case helping to detect malnutrition early and reporting it to related parties, then cadres will help improve the health status of children.

The results showed that there was an increase in knowledge about stunting. The increase occurred due to information about stunting when training on stunting was held. Oktavia's research (2017) shows that after being given a refresher or intervention there is an increase in knowledge in the good category, namely 87% or as many as 27 people and 13% in the sufficient knowledge category of 4 people. (17)

Increased knowledge about stunting, especially in early detection and prevention of stunting, continued to increase from the first, second and third months. This condition was caused by the cadres trying to increase their knowledge through other information media, especially electronic media such as the internet. The number of sources of information the respondent has will increase the knowledge they have. This is in line with the opinion which states that information is one of the sources that can increase knowledge, where the more sources of information, the more knowledge they have.<sup>(14)</sup>

The increase in respondents' knowledge about stunting cannot be separated from the role of information media that the respondents have. The results show that 76.7% of respondents have information media in the form of electronic media as shown in table 4. The role of electronic media is important in increasing a person's knowledge, including the *dasa wisma* cadres. Social media in life brings and forms a new world in the mindset of adolescents in interacting and communicating in new ways, especially in the world of education by presenting



a wide variety of educational information from various aspects. The mass media is a window that allows people to see events that occur outside, a mirror of various events that occur in society and reflect what they are, a tool for selecting various events that occur in society, a means of translating and pointing direction for various uncertainties or various alternatives, a forum for presenting a variety of information and ideas to the audience, thus enabling responses and feedback, communication partners that allow interactive communication. Mass media gives birth to information as knowledge by all users.<sup>(16)</sup> Research shows there is an effect of using social media in increasing knowledge about stunting.<sup>(17)</sup>

This is in line with the results of research by Alfridsyah et al. (2013) which states that health education can increase knowledge. Increased knowledge occurs due to the willingness in the mother to follow and know the efforts to prevent stunting.<sup>(18)</sup> This is consistent with Notoatmodjo's theory which states that most human knowledge is acquired through the eyes and ears.<sup>(14)</sup>

## Conclusion

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

1. Respondents' knowledge of stunting before the lowest was 9, the highest was 17 and the average was 11.63 with a standard deviation of 1.973. The lowest knowledge of respondents about stunting 1 month after training was 11, the highest was 19 and the average was 15 with a standard deviation of 2.7. The lowest knowledge of respondents about stunting 2 months after stunting training was 12, the highest was 20 and the average was 16.5 with a standard deviation of 2.3. The lowest knowledge of respondents about stunting 3 months after stunting training was 15, the highest was 20, and the average was 18.867 with a standard deviation of 1.33.
2. The Wilcoxon test results obtained a Z value of -4.291 with a significance of 0.000, so it can be concluded that there is a significant difference in knowledge 2 months after training and knowledge before training.
3. The results of the Wilcoxon test showed that the mean differences in knowledge 3 months after training and knowledge before training were 7,237. The Wilcoxon test results obtained a Z value of -4.850 with a significance of 0.000, so it can be concluded that there



is a significant difference in knowledge 3 months after training and knowledge before training.

4. The results of the Wilcoxon test showed that the mean difference in knowledge 2 months after training and knowledge 1 month after training was 1.3. Wilcoxon test results obtained a Z value of -2.00 with a significance of 0.046, so it can be concluded that there is a significant difference in knowledge 2 months after training and knowledge 1 month after training.

### Suggestion

Based on the results of the research and discussion, suggestions can be given to the puskesmas in order to issue policies or empowerment programs for dasa wisma cadres in the form of health training, especially about stunting so that they can increase knowledge about stunting.



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