

The Effectiveness of Health Education on the **Knowledge Level of Cadres about Stunting**

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ABSTRACT

Background: Stunting is a condition of failure to thrive in children under five due to chronic malnutrition, especially in the first 1000 days of life. A child is classified as stunted if the length or height according to age is lower than the applicable national standard. It is essential to measure stunting as early as possible to avoid long-term adverse effects such as stunted child development. According to data from the Ministry of Health's Basic Health Research in 2018, 30.8% of children were stunted. Although the prevalence of stunting decreased from 37.2% in 2013, the stunting rate remains high because the WHO standard sets the stunting rate below 20%. Jrakah Village, Selo sub-district, is one of the areas with an increased incidence of stunting that there were 32 children with stunting.

Objective: This study aims to determine the level of knowledge of the subjects who were given health education and those who did not follow the health education.

Method: This type of research is descriptive research with a pre-test and post-test group design. We involved 34 cadres who applied health education about Stunting at Boyolali district

Results: The average score of cadres who were given health education about stunting was higher than cadres who were not given health education about stunting. 13 cadres received health education about stunting and 10 for cadres who were not given health education about stunting.

Conclusion: The highest average score was obtained in subjects who were given health education about stunting.

Keywords: Health Education, Knowledge, Cadre, Stunting

1. INTRODUCTION

Stunting is a condition of failure to thrive in children under five due to chronic malnutrition, especially in the first 1000 days of life. A child is classified as stunted if the length or height according to age is lower than the applicable national standard. It is important to measure stunting as early as possible to avoid long-term adverse impacts such as stunted child development [1]. The growth process experienced by toddlers is a cumulative result since the toddler was born. A good and healthy nutritional state in infancy (under five years of age) is an important foundation for future health. Conditions that have the potential to interfere with the fulfillment of nutrients, especially energy and protein in children will cause growth problems [2].

Stunting is a nutritional problem faced in the world, especially in poor and developing countries [3]. Stunting in children under five is a consequence of several factors that are often associated with poverty including nutrition, health, sanitation and the environment. And the nutritional status of children under five is one of the health indicators that is assessed for its success in achieving the MDGs. Childhood under five is a group that is vulnerable to malnutrition, one of which is stunting [4]. The Ministry of Health's Basic Health Research (Riskesdas) in 2018 found that 30.8% were stunted [5]. Although the prevalence of stunting

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decreased from 37.2% in 2013, the stunting rate remains high and there are still two provinces with prevalence above 40%. WHO standards. Set the stunting rate below 20%. Therefore, stunting prevention efforts are needed, one of which is health education in the community, so that the incidence rate can be minimized.

Many factors cause children to become stunted, one of which is the level of knowledge of cadres. Knowledge is defined as the result of knowing, and this occurs after people have sensed a certain subject. From experience and research, it is concluded that knowledgebased behavior will be more lasting than knowledgebased behavior, as well as the skills of cadres [6]. Knowledge and skills of cadres can increase or decrease. This can happen because the cadres are less active so they forget about the things that have been learned so that their knowledge decreases. The high value of knowledge and skills is influenced by formal education [7], cadre courses, frequency of following coaching, activeness of cadres in posyandu and length of time as cadres [8]. The influence of cadres is very large in early detection of stunting in children, good knowledge of cadres about stunting will make early detection of stunting at posyandu more accurate and precise, thus reducing stunting rates.

Jrakah Village, Selo sub-district, is an area with a high stunting rate in the sub-district [9], there are 32 children with stunting. In addition, Jrakah Village also has a cadre of about 30 cadres from 10 posyandu. The study was conducted to determine the effectiveness of the health education provided on the knowledge of cadres about stunting and its prevention.

2. MATERIALS & METHODS

This type of research is descriptive research with a pre-test and post-test group design. The group studied was the health cadres of Jrakah Boyolali Village who were given health education. The research was conducted from April to July 2021 in Jrakah Village, Selo District, Boyolali Regency. The research subjects were people who were registered as health cadres in Jrakah Village, Selo District, Boyolali Regency. The sample used in this study were 34 health cadres in Jrakah Village, Selo District, Boyolali Regency.

This research uses Total Sampling or called Saturated Sampling. Saturated Sampling is a sampling technique when all members of the population are used as samples. This is done when the population is relatively small or less than 100 people [10]. This study uses a data collection method with a questionnaire containing questions about stunting, as a measuring tool to determine the level of knowledge of the subject.

Analysis of the data used in this study used a descriptive research model, where data on knowledge of mothers who were given health education and no health education regarding stunting was presented, the data will be presented in descriptive form and do not test hypotheses.

3. RESULT

3.1 Characteristics of Subjects Based on Age

The subjects involved in this activity are people who are registered as health cadres in Jrakah Village, Selo District, Boyolali Regency, the age of the subjects involved in this activity include subjects aged 20-25 years by 20.58%, 26-30 years old by 17.64%, 31 - 35 years old by 23.52%, 36 - 40 years old by 20.58%, and age > 41 years by 17.64%.

The productive age is the age that plays the most role and has good cognitive abilities. Thus, at this age has an influence on the level of knowledge [11]. A person's age also affects a person's perception and mindset. The older you get, the more your grasping power and mindset will develop. This also affects a person's cognitive [12]. In this study, the largest percentage of subjects aged 31-35 years with a percentage of 23.52%, and the smallest percentage at the age of 26-30 and > 40 years with a percentage of 17.64%.

3.2 Characteristics of Subjects Based on Education Level

The educational level of the subjects involved in this activity varied from elementary to undergraduate level with the percentages of subjects having an elementary education background of 23.52%, junior high school of 47.06%, high school of 26.47%, and undergraduate degree 2.94 %. The higher a person's education, the higher a person is in receiving information and in the end it will affect his level of knowledge. On the other hand, if a person has a lower level of education, it will hinder the development of one's attitude towards receiving information and newly introduced values [13].

In a study conducted by Dharmawati in 2016, which examined the level of education, age, and years of service with the level of knowledge of dental and oral health for elementary school health and health teachers in the sub-district of the visible Siring Gianyar, it was found that there was a relationship between the subject's level of education and his level of knowledge. The subjects in this study had the highest education level at the junior high school level of 47.06%, and the lowest level at the undergraduate level of 2.94% [14].

3.3 Characteristics of Subjects Based on Length of Being a Cadre

Subjects involved in this activity have experience as cadres in different periods of time, namely subjects who have cadre experience for < 10 years amounted to 70.585%, while cadres with experience > 10 years



amounted to 29.41%. The length of time being a cadre can affect the knowledge of the cadres themselves.

The increase in knowledge according to research by Bostrom is influenced by experience, the main abilities which include flexibility, creativity, ability to change and the desire to continue learning [15]. Cadres with longer work experience will gain more knowledge than new cadres. In this study, the highest percentage was in the subject or cadre who had a working period of < 10 years, which was 70.585%.

3.4 Characteristics of Subjects Based on Knowledge Level

Knowledge level is defined as the subject's ability to answer questions. In this study the subjects were divided into two groups, where the first group received treatment in the form of health education about stunting, and the second group was not given health education about stunting. The questions are questions with a total of 15 items, and each subject will fill out the questionnaire before and after being given treatment or not being given treatment. The maximum score that will be obtained is 15 if you answer all correctly, and the smallest score is 0 if you cannot answer at all.

Table 1. Shows the difference in the average posttest score between the group of cadres who were given health education about stunting and the group of cadres who were not given health education about stunting. The results showed that the average score of cadres who were given health education about stunting was higher than cadres who were not given health education about stunting, namely 13 for cadres who received health education about stunting and 10 for cadres who were not given health education about stunting. The maximum score of "15" was also found in cadres who received health education about stunting.

4. CONCLUSION

Based on the results of this study, it can be concluded that the research subjects have the most age in the age range of 31-35 years, the subjects of this study have the highest education level at the junior high school, research subjects with the length of work as cadres, the most were subjects or cadres who had worked for < 10 years. The highest average score was obtained in the group of subjects who were given health education about stunting.

AUTHORS' CONTRIBUTIONS

All authors were involved in developing the paper concept, analysed data and wrote the first draft of the manuscript. All authors critically reviewed the content and approved the final version submitted for publication.

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REFERENCES

- [1]. Bappenas. Guidelines for Implementing Integrated Stunting Reduction Interventions in Districts/Cities, Indonesia: 2018.
- [2]. Tumilowicz A, Beal T, Neufeld LM. A review of child stunting determinants in Indonesia. Matern Child Nutr. 2018;14(October 2017):1–10. DOI: https://doi.org/10.1111/mcn.12617
- [3]. Titaley CR, Ariawan I, Hapsari D, Muasyaroh A. Determinants of the stunting of children under two years old in Indonesia: a multilevel analysis of the 2013 Indonesia Basic Health Survey. Nutrients. 2019;11(1106):1–13. DOI: https://doi.org/10.3390/nu11051106
- [4]. Kebebe H, Id K, Bobo FT, Yilma MT, Woldie M. Poor nutrition for under-five children from poor households in Ethiopia: evidence from 2016 demographic and health survey. PLoS One. 2019;1–16. DOI: https://doi.org/10.1371/journal.pone.0225996
- [5]. Department health research and development. Basic Health Research. Indonesia; 2018.
- [6]. Silas L, Rantetampang AL, Tingginehe R, Mallongi A. The factors affecting stunting child under five years in Sub Province Mimika. Int J Sci Healthc Res [Internet]. 2018;3(2):99. Available from: www.ijshr.com.
- [7]. Rakhma LR, Erlinda F, Apriliana WF. Correlation of education level to mother 's knowledge following therapeutic feeding center (tfc) program in Sukoharjo Central Java. Prev J Kesehat Masy Vol. 2017;8(2):66–72.
- [8]. Rahmawati ND, Dewi Sartika RA. Cadres' role in posyandu revitalization as stunting early detection in Babakan Madang Sub-District, Bogor District. ASEAN J Community Engagem. 2020;4(2):485– 99.
- [9]. Sari IK, Wardah AR, Suswardany DL. Characteristics of stunting childs aged 6-24 months in the work area of selo puskesmas, Boyolali Regency. Semin Nas Kesehat Masy UMS. 2019;27(4):99–103.
- [10].Sugiyono. Research Methods quantitative, qualitative and R & D. 1st ed. Indonesia: Alfabeta; 2019.



- [11].He Z, Cheng Z, Shao T, Liu C, Shao P, Bishwajit G, et al. Factors influencing health knowledge and behaviors among the elderly in rural China. Int J Environ Res Public Health. 2016;13(10):1–16.
- [12].Sun JK, Smith J. Self-perceptions of aging and perceived barriers to care: Reasons for health care delay. Gerontologist. 2017;57(S2):S216–26. DOI: https://doi.org/10.1093/geront/gnx014
- [13].Diaz-Quijano FA, Martínez-Vega RA, Rodriguez-Morales AJ, Rojas-Calero RA, Luna-González ML, Díaz-Quijano RG. Association between the level of education and knowledge, attitudes and practices regarding dengue in the Caribbean Region of Colombia. BMC Public Health. 2018;18(1):1–10. DOI: https://doi.org/10.1186/s12889-018-5055-z
- [14].Dharmawati IGAA, Wirata IN. Relationship between education level, age, and period of work with level of dental and mouth health knowledge on elementary school health and health teachers in Tampak Siring District Gianyar. J Kesehat Gigi. 2016;4(1):1–5.
- [15].Boström M, Holmgren K, Sluiter JK, Hagberg M, Grimby-Ekman A. Experiences of work ability in young workers: an exploratory interview study. Int Arch Occup Environ Health. 2016;89(4):629–40. DOI: https://doi.org/10.1007/s00420-015-1101-7