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DEVELOPMENT AND EFFECTIVENESS OF THE STUNTING PREVENTION COUNSELING TRAINING MODULE ON THE KNOWLEDGE AND ATTITUDES OF HEALTH CADRES IN THE KINOVARO COMMUNITY HEALTH CENTER WORK AREA

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Abstract

Background: Knowledge and attitudes of health cadres in providing stunting counseling are very necessary. One effort to improve the knowledge and attitudes of health cadres is through the development of a stunting counseling training module for health cadres. Methods: This research is experimental research with a quantitative approach. This research was conducted in the Kinovaro Health Center working area, Central Sulawesi Province with a sample of 100 health cadres in 20 Posyandu in the Kinovaro Health Center working area. The independent variable is the effectiveness of education using the stunting prevention module, the mixture of counseling for health cadres and the dependent variable, namely knowledge and attitudes. Data collection techniques use tests and questionnaires. The data analysis technique uses a comparative test, where the knowledge of Health cadres uses the Wilcoxon test, while the attitude of Health cadres uses the paired red sample-t test. Results: The results of the research show that education using the stunting prevention module and counseling for health cadres is effective in changing the knowledge and attitudes of health cadres. This is shown by the results of a comparative test of knowledge of health cadres before (pre) and after intervention (post) with the Wilcoxon test showing a significant difference with a p-value <5% significance level (0.000<0.05), as well as the attitude of Health cadres which shows that there is a significant difference with a p-value <5% significance level (0.000<0.05). The mean knowledge score shows an increase pre-intervention (12.01), post-1 (12.47), post-2 (13.01) and post-3 (13.68), as well as the mean attitude score shows an increase pre-intervention (48.53), post-1 (51.92), post-2 (52.63) and post-3 (53.78) which means that education using stunting prevention modules and health cadre counseling is effective in increasing knowledge and attitudes of Health cadres. Conclusions: Education using the stunting prevention counseling module has proven to be effective in increasing the knowledge and attitudes of health cadres. Education using this counseling module can be implemented widely in various Community Health Centers to increase the capacity of health cadres in preventing stunting.

Keywords: Education, Stunting Prevention Counseling Module, Knowledge, Attitudes.

Highlight box

This research is aimed at finding out the effectiveness of education using the stunting prevention module and health cadre counseling on changes in health cadres' knowledge and attitudes before and after being given the intervention. The results of the research show that education using the stunting prevention module and counseling for health cadres is effective in changing the knowledge and attitudes of health cadres. This is shown by the results of a comparative test of knowledge of health cadres before (pre) and after intervention (post) with the Wilcoxon test showing a significant difference with a p-value <5% significance level (0.000<0.05), as well as the attitude of Health cadres which shows that there is a significant difference with a p-value <5% significance level (0.000<0.05). The mean knowledge score shows an increase pre-intervention (12.01), post-1 (12.47), post-2 (13.01) and post-3 (13.68), as well as the mean attitude score shows an increase pre-intervention (48.53), post-1 (51.92), post-2 (52.63)

and post-3 (53.78) which means that education using stunting prevention modules and health cadre counseling is effective in increasing knowledge and attitudes of Health cadres. Education using the stunting prevention counseling module has proven to be effective in increasing the knowledge and attitudes of health cadres. Education using this counseling module can be implemented widely in various Community Health Centers to increase the capacity of health cadres in preventing stunting.

1. INTRODUCTION

Stunting is a nutritional growth and development disorder in toddlers which is still a national and global problem. Indonesia ranks 5th in the incidence of stunting in the world. Regional Health Research Results: The prevalence of stunting among children under five in Indonesia has decreased from 37.2% in 2013 to 33.6% in 2016 to 30.8% in 2018. Meanwhile, based on SSGBI results in 2019, stunting has decreased to 27.67%. Even though the percentage has decreased, short and thin toddlers are still a health problem in Indonesia that needs serious treatment. In Central Sulawesi, the prevalence of stunting is 31.26%, ranking the 10th highest incidence of stunting out of 34 provinces in Indonesia. Meanwhile, the prevalence of stunting in toddlers aged 12-59 months in the Kinoivaro Health Center working area in 2019 was 133 toddlers, in 2020 it was 206 toddlers and in 2021 it was 167 toddlers. Meanwhile, in 2022 there will be another increase, namely as many as 209 toddlers experiencing stunting. There are several factors that cause stunting, namely non-exclusive breastfeeding, poor environmental hygiene, babies with a history of LBW, family income, inadequate nutritional intake, maternal education, family support, maternal employment, gestational age, lack of hygiene in caring for babies and maternal height.[1]

Stunting can be caused by chronic malnutrition, infectious diseases and socio-economic factors. low knowledge and attitude of maternal nutritional care. Apart from that, poor sanitation and access to clean water also play a role in increasing the risk of stunting. Children with stunting are at greater risk of delayed motor development, low cognitive abilities, neurodevelopmental disorders, delayed tooth eruption and dental caries compared to children who do not experience stunting. Apart from that, children are also vulnerable to chronic diseases as adults.[2] Various efforts can be made to prevent stunting. Several studies report that improving nutrition in the first 1000 days of a child's birth, early initiation of breastfeeding, exclusive breastfeeding and providing appropriate complementary foods play a significant role in preventing stunting. In addition, encouraging healthy eating habits and reducing the risk of over- or under-feeding, ensuring that families have access to sufficient and nutritious food and providing access to health services are also efforts that can be taken to prevent stunting.[3] However, research reports that mothers' knowledge about stunting prevention is still low. Therefore, education through counseling to educate parents and caregivers about the importance of proper nutrition in the first 1000 days of a child's birth, proper feeding methods and how to prevent and manage disease, as well as good sanitation are very important in efforts to prevent stunting. Apart from health workers, health cadres also play an important role in assisting families to prevent stunting. Health cadres are at the forefront because they are the individuals closest to society. Apart from that, the presence of health cadres in the community has a strategic place to provide education to pregnant women and mothers of toddlers. Education is provided about maternal and child health, exclusive breastfeeding, and other health topics related to nutrition such as nutritious food choices and preventing malnutrition.[4]

Research reports that stunting prevention education is effective in increasing the knowledge of pregnant women and mothers of toddlers. However, providing education to pregnant women and mothers under five is not enough because education is only limited to providing information to improve knowledge and attitudes, while counseling focuses more on providing support for changing behavior and practices related to stunting prevention. However, health cadres lack knowledge and skills in communicating to provide education and counseling cause difficulties for pregnant women and mothers of toddlers in receiving information and this has an impact on their attitudes and behavior in efforts to prevent stunting.[5] Therefore, it is very important to increase the knowledge and attitudes of health cadres in providing counseling about stunting prevention to pregnant women and mothers of toddlers. Efforts that have been made by the research team in phase 1 in 2023 are creating a Counseling Stunting Prevention Module for Health Cadres. This module has been tested and the results are valid for use. However, an evaluation of health cadres' knowledge and attitudes towards the contents of the module has not been carried out. Based on this, this phase 2 research was carried out with the aim of assessing the effectiveness of education using the Counseling Stunting Prevention Module for Health Cadres on the knowledge and attitudes of health cadres.[6]

So efforts are needed to deal with stunting in order to reduce the impacts that will occur. The impacts of stunting are immediate and long-term, including increased morbidity and mortality, poor child development and learning capacity, increased risk of infection and non-communicable diseases in adulthood, and reduced productivity and economic capacity. For this reason, efforts to prevent stunting are needed. Stunting prevention is an issue that must be the responsibility of all of us. As community representatives, Posyandu cadres play an important role in implementing stunting prevention. However, there is still a lack of cadre knowledge and skills due to a lack of training for posyandu cadres in carrying out their duties as posyandu cadres.[7] One effort to increase cadres' knowledge and skills in preventing stunting is through counseling training. Interviews conducted with Kinovaro Health Center Nutrition officers on April 28 2021 revealed data on 100 health cadres spread across 20 posyandu. Training related to stunting counseling has never been carried out, the intervention provided is only in the form of education to cadres without any evaluation of their understanding. Efforts that have been made by the research team in phase 1 in 2023 are creating a Counseling Stunting Prevention Module for Health Cadres. This module has been tested and the results are valid for use.[8] However, an evaluation of health cadres' knowledge and attitudes towards the contents of the module has not been carried out. Based on this, this phase 2 research was carried out with the aim of assessing the effectiveness of education using the Stunting Prevention Module Anthology Counseling for Health Cadres on the knowledge and attitudes of health cadres. Sigi Regency is the area with the highest incidence of stunting in Central Sulawesi, namely 36.8%. If it is not prevented immediately, this number will continue to increase and will have a negative impact on toddlers who experience stunting.[9] Cadres play a role as a driving force in preventing and overcoming stunting in society. To assist cadres in providing counseling to pregnant women and mothers of toddlers, a stunting prevention training module is needed which can be used as a guide for cadres when providing counseling so that the counseling given is focused and the messages given can be conveyed well. Health cadres are male or female community members who are selected by the community and trained to handle individual and community health problems and work in very close contact with places where health

services are provided. The selection of cadres is that they are able to work voluntarily, have the trust of the community and have good credibility where their behavior becomes a role model for the community, have a high spirit of service, have a steady income, are good at reading and writing, and are able to develop the community around them.[10]

Health cadres are at the forefront of public health services, acting as main actors, providers of health information, and role models for healthy living behavior. Health cadres act as a liaison between health workers and nutritionally vulnerable groups, such as pregnant women and toddlers. To be able to carry out their roles well, cadres need to receive training to improve cadres' abilities, knowledge, technical skills and dedication. Cadre training is provided on an ongoing basis in the form of basic and tiered training according to guidelines.[11] Training is a learning process that makes it possible to carry out work according to standards. Through training, there is a process of increasing competence and being able to train abilities, skills, expertise and knowledge. Before the training, modules were prepared in stages, namely:

1) Planning Stage for Preparing the Module Content Outline (Gbim);
2) Writing Stage: Preparation of Outline/ Module Design, Writing Draft I, completing Draft I into Draft II;
3) Trial Review and Revision Stage: Expert and Peer Review, Small Group Trials and Field Trials;
4) Finalization and Printing Stage: Module Manuscript Creation, printing.[12]

Counseling modules are learning materials that are systematically designed based on a certain curriculum and packaged in the form of the smallest learning units and allow them to be studied independently in a certain amount of time. The module functions as learning material used in training activities. With the module, participants can learn more focused and systematic so that they can master competencies and provide learning instructions for participants during the training. Counseling is a helping relationship where one party (the counselor) aims to improve the ability and mental function of the other party (the client) so that they can better deal with the problems/conflicts they face. Assistance in counseling is to provide conditions, tools and skills that enable clients to help themselves in fulfilling a sense of security, love and self-esteem, making decisions and self- actualization. It was also stated that the aims of counseling were

1) Changing wrong behavioral adjustments,
2) Learning to make decisions
3) Preventing problems from arising.[13]

For this reason, one of the efforts that can be made is education for health cadres in preventing stunting for several important reasons, namely through education it can

1) Increase knowledge and awareness,
2) Education about stunting can provide in-depth understanding to health cadres regarding the causes, impacts, and prevention of stunting. Educated cadres will be better prepared to recognize the early signs of stunting and take preventive action.

3) Raising awareness of the importance of proper nutrition during the first thousand days of a child's life, including during pregnancy and infancy up to the age of two years.
4) Increasing effective counseling skills. Through education, health cadres can learn effective counseling techniques to provide information and support to mothers and families regarding stunting prevention. With ongoing counseling, health cadres can help families adopt practices that can prevent stunting, such as exclusive breastfeeding, providing appropriate complementary foods, and good hygiene practices.
5) Education helps cadres develop good communication skills, enabling cadres to interact more effectively and empathetically with the community.
6) Education ensures that cadres have a consistent understanding of the stunting prevention program, so that they can implement the program correctly and efficiently.
7) Support for Mother and Family. Providing Relevant Information: Educated cadres can provide relevant and timely information to mothers and families regarding good feeding practices and child health care. Cadres play a role as a driving force in preventing and overcoming stunting in society. To assist cadres in providing counseling to pregnant women and mothers of toddlers, a stunting prevention training module is needed which can be used as a guide for cadres when providing counseling so that the counseling given is focused and the messages given can be conveyed well.[14]

2. METHODS

This type of quantitative research uses a quasi-experimental design with a one group pretest-posttest design approach. This phase 2 research was carried out in the Kinovaro Community Health Center Work Area from 20 May to 23 May and 3 June to 4 June 2024. The research was carried out in 3 different locations, namely the Rondingo Village Office, Kinovaro Community Health Center and the Uwemanje Village Office, Sigi Regency. The independent variable in this research is the effectiveness of education using the prevention and counseling module for health cadres. The population in this study was all health cadres in the Kinovaro Health Center Working Area, totaling 100 people. Meanwhile, the sample in this research is the entire population used as a sample. Thus, the total sample in this study was 100 health cadres taken using a total sampling technique. The types of data used are primary data and secondary data.

Primary data was obtained through filling out a questionnaire including the characteristics of the respondents as well as the respondents' knowledge and attitudes. Meanwhile, secondary data was obtained from the Kinovaro Community Health Center regarding the number of cadres and profile of the Kinovaro Community Health Center. Data collection was carried out by filling out a questionnaire. The instrument used in this research was a knowledge and attitude questionnaire created by the research team. The knowledge questionnaire consists of 15 positive statement items and uses the Guttman scale. If the respondent answers "correctly" they are given a score of 1 and if the respondent is "wrong" they are given a score of 0. This questionnaire has been tested for validity and reliability so that Cronbach's alpha internal consistency reliability is 0.718. The attitude questionnaire consists of 15

positive statement items using a Likert scale. Researchers have tested the validity and reliability of this instrument. The values for the favorable question items are Strongly disagree = 1, Disagree = 2, Agree = 3, Strongly agree = 4. This questionnaire has been tested for validity and reliability so that Cronbach's alpha internal consistency reliability is 0.628.

3. RESULTS

The research was aimed at finding out the effectiveness of education using the stunting prevention module and the mixture of health cadre counseling on changes in health cadres' knowledge and attitudes before and after being given the intervention. Testing the effectiveness of using the stunting prevention module and counseling in the Kinoivaro Community Health Center working area was given to 100 health cadre respondents. The characteristics of respondents in this study were seen to be based on respondent information related to age, gender, education, occupation, and length of service as a Health Cadre. The description of each respondent's characteristics is found in (table 1).

Table 1: Distribution of Respondent Characteristics (n = 100)

Characteristic	Frequency	Percentage (%)
Age		
1. < 30 yo	29	29
2. 30 – 39 yo	47	47
3. 40 – 49 yo	14	14
4. ≥ 50 yo	10	10
Gender		
Male	2	2
female	98	98
Education		
1. Ementary School	10	10
2. Primary High School	27	27
3. Senior High School	52	52
4. Dyploma III	9	9
5. Bachelor	2	2
Employment		
1. Housewife	66	66
2. Farmer	19	19
3. Private work	6	6
4. Midwife	9	9
Lama kerja sebagai kader		
1. < 1 yo	18	18
2. 1 -5 yo	50	50
3. 6 – 10 yo	10	10
4. 11 – 15 yo	6	6
5. > 15 yo	8	8

(Table 1) shows that the majority of respondents were aged 30 years to 39 years, namely 47%. At least 10% of respondents were aged ≥ 50 years. Based on gender, the majority are female (98%) and only 2% of health cadres are male. In terms of education, the majority of respondents were high school/vocational school graduates, namely 52%, while at least 2% were bachelor's degree graduates. Meanwhile, in terms of work, the majority of health cadres' jobs are as URT (household business), namely 66. Meanwhile, the least is working in the private sector, as many as 6%. Furthermore, most of the respondents' length of time as health cadres was 1-5 years (50%), while

the least number of respondents were 11-15 years (6%). Provided intervention in the Kinovaro Community Health Center working area. Based on the results of the analysis, it is known that before the intervention was given using the stunting prevention module as a media, health cadre counseling was included, the knowledge and attitudes of health cadres regarding stunting prevention counseling in the Work Area. The results of descriptive statistical analysis show that 12 indicates that there are still 28% of health cadres with sufficient knowledge of stunting counseling (table 2).

Table 2: Distribution of Health Cadre Knowledge Categories before Intervention

Number	Interval Score	Frequentcy	categori
1	X ≥ 10	72	Good
2	5 ≤ X < 10	28	Average
3	X < 5	0	Less
Total		**100**	

The attitude of Health cadres towards stunting counseling, before the intervention showed that there were still 24% of Health cadres with attitudes towards stunting counseling in the sufficient category (table 3).

Table 3: Distribution of Respondents' Attitude Categories Before Intervention

Number	Interval Score	Frequentcy	categori
1	X ≥ 45	74	Good
2	30 ≤ X < 45	26	Average
3	X < 30	0	Less
Total		**100**	

Description of Health Cadres' Knowledge and Attitudes After Being Given Interventions in the Kinovaro Health Center Work Area. With the intervention in the form of a stunting prevention module, an anthology of health cadre counseling has had a positive impact on changing the knowledge and attitudes of health cadres regarding stunting counseling for health cadres in the Kinovaro Community Health Center Working Area. This was demonstrated by carrying out the intervention 3 times, showing an average increase in cadres' knowledge and attitudes. For more details, see (figure 1).

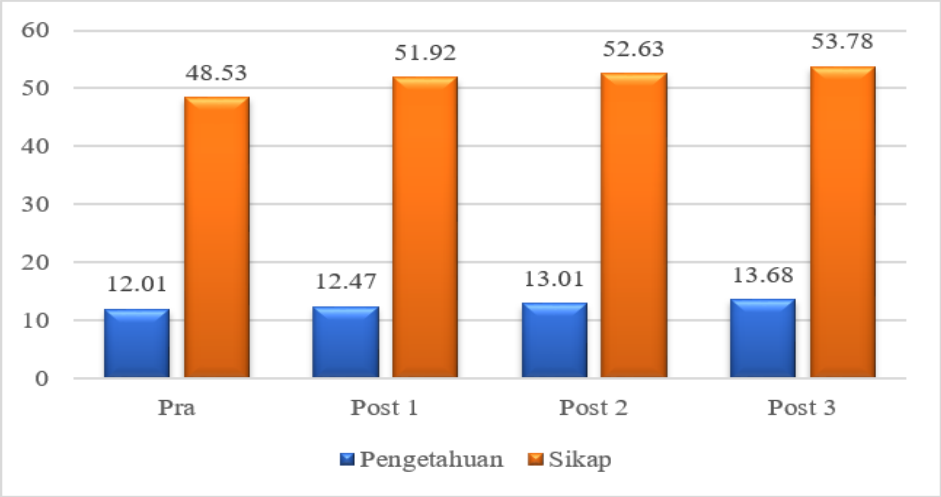

Figure 1: Average Change in Knowledge and Attitudes of Health Cadres regarding Stunting Counselling

4. DISCUSSION

The results of the research show that an educational intervention using the Health Cadre Counseling Anthology Stunting Prevention Module is effective in increasing the knowledge and attitudes of health cadres in stunting counseling. Counseling modules are learning materials that are systematically designed based on a certain curriculum and packaged in the form of the smallest learning units and allow them to be studied independently in a certain amount of time. The module functions as learning material used in training activities. With the module, participants can learn more focused and systematic so that they can master competencies and provide learning instructions for participants during the training.[15]

The results of this research are in line with research conducted by Yustiari et al who also stated in the research that there were differences in the knowledge and attitudes of cadres after being given education. The existence of a Health module can improve stunting prevention. Educational modules are also effective in changing health cadres' attitudes towards stunting prevention. Because, knowledge underlies changes in human attitudes and behavior. Research conducted in West Java found that health cadres who took part in stunting prevention training and counseling had good knowledge and high motivation, which was significant.[16]

This shows that ongoing guidance and training can improve the knowledge and attitudes of health cadres in the long term. A study in Boyolali Regency found that health education using modules significantly increased health cadres' level of knowledge about stunting. The average score of cadres who received health education was higher than those who did not receive health education.

Research conducted at the Tomini Community Health Center found that health cadre training significantly increased knowledge, attitudes and skills in detecting stunting and risk factors for stunting in children under five. The training provided included lectures, question and answer sessions, and brainstorming activities, and the results showed a significant increase in these variables after the training.

This research is consistent with research conducted in Indonesia which reported that training provided using module media with lecture, question and answer and brainstorming methods significantly increased cadres' knowledge, attitudes and skills regarding stunting. Other research conducted by Pascoal et al stated that training using the lecture method using module media significantly increased knowledge and prevention of stunting among health cadres before and after the intervention.[17]

A literature review also reports that education using effective modules increases mothers' knowledge and attitudes about stunting prevention. Education was given three times on different days and evaluation of the knowledge and attitudes of health cadres was carried out 4 times, namely on pre, post education on the first day, post education on the second day and post education on the third day.

The average knowledge score before and after the intervention was 12.01 to 13.01. Meanwhile, the average attitude value was 48.53 to 53.78, which shows that there was a change in the level of knowledge and attitudes of health cadres before and after the intervention. Education is provided using lecture, question and answer and brainstorming methods using the media module Stunting Prevention Potpourri Counseling for Health Cadres which was created in phase 1 of the research. This module contains material about health cadres, stunting and counseling.[18]

However, the results of this study are inversely proportional to research conducted by Ilda and Tisnawati which stated that there was no significant relationship between the level of knowledge of health cadres before and after education using the 3A module. Differences in these findings could be caused by different locations and respondents. Training modules combine structured learning activities such as lectures, question and answer sessions, and brainstorming. These activities help health cadres understand the importance of preventing stunting and their role in overcoming it.

Demonstrations and practical exercises enable health workers to apply the knowledge they gain in real-world contexts. This hands-on approach helps them develop self-confidence and a positive attitude towards stunting prevention. Training modules often include components that increase self-efficacy and self-confidence among health workers. Increased confidence in their ability to prevent stunting leads to a more positive attitude towards their role in addressing this public health problem.[19]

Social education and counseling are considered important in involving the community in efforts to prevent stunting. Social educators play an important role in conveying information and education about the dangers of stunting to the public so that they can motivate them to participate in prevention and treatment efforts.

With the results of the research conducted and previous studies, it is clear that the module is effectively used in increasing individual understanding/knowledge or attitudes towards what is the aim of developing the module itself. In the stunting prevention module, the health cadre counseling program makes it easier for Health cadres. Of course, the hope is that this module can increase the understanding / knowledge and attitudes of Health cadres regarding stunting counseling so that they can be more optimal in preventing stunting.[3]

5. CONCLUSIONS

Based on the research results above, it can be concluded that with the stunting prevention module, health cadre counseling is effective in increasing health cadres' knowledge and attitudes towards stunting counseling. This is demonstrated by the results of comparative tests which show that there are significant differences between before and after the intervention.

The mean value from before the intervention to after the intervention, both the 1st, 2nd and 3rd interventions, shows positive changes in each intervention. Through the results of this research, the effectiveness of the research product in the form of a stunting prevention module, an anthology of health cadre counseling, can be used by health cadres, especially in increasing the knowledge and attitudes of health cadres regarding stunting counseling.

It is hoped that the Stunting Prevention Module, Bunga Rampai Health Cadre Counseling, can be used as a reference in efforts to prevent stunting in the Kinovaro Community Health Center Working Area, Sigi Regency.

It is hoped that health cadres will continue to improve their knowledge and attitudes regarding stunting prevention counseling and can carry out stunting prevention counseling for pregnant women, WUS and PUS using the Health Cadre Counseling Anthology Stunting Prevention Module.

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Conflicts of Interest:

There are no authors who declare conflicts in this research and writing.

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