Short Counselling Program Enhances Health Care Workers' Knowledge and Attitude in Early Detection of Stunting in Children: Influencing Factors

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Abstract. Indonesia's stunting prevalence remains higher than the WHO stunting prevalence standards for developing countries. Health community workers (HCWs) handle this issue effectively and contribute to the growth of community and primary healthcare systems. *The aim of this study was to identify the effect of* HCWs Counseling Program *on the knowledge and attitude of HCWs toward early detection of childhood stunting. A quasi-experimental research design with pre-test and post-test was employed. 40 Posyandu HCWs from working group IV (Pokja IV) cadres in Sumbersekar Village, Dau District, Malang Regency, East Java, Indonesia, are taking part. For data collection, the Indonesian version of the attitude questionnaire was used. HCWs* Counselling Program has a statistically significant effect in improving attitudes toward early detection of stunting. Counselling Program on health community workers is effective in improving knowledge and attitudes toward early childhood stunting detection. Improving HCWS knowledge and attitudes toward early detection of childhood stunting is critical because they play an essential part in the delivery of effective interventions to reduce stunting in children.

Keywords: Health community workers; stunting early detection; counselling program; attitude; behavior

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1. Introduction

A toddler that is stunted has shorter stature or a lower body mass percentage relative to their age. This condition is determined by measuring height or length more than plus or minus two standard deviations from the World Health Organization's median child growth standard [1]. According to the findings of the 2021 SSGI (*Studi Status Gizi Indonesia*), the prevalence of stunting has dropped to 24.4%. Even if it has dropped, the prevalence of stunting in Indonesia remains higher than the WHO stunting prevalence standards for developing nations, which is 20% [2]. Children who experience stunting may have cognitive impairments, motor disorders, abnormalities of the body's growth, a higher risk of morbidity, or even death. Numerous Indonesian studies have shown that health education, particularly with regard to nutrition prior to pregnancy, has an impact on people's knowledge, attitudes, and practices [1]. The continual unequal distribution of healthcare personnel around the world is a major impediment to achieving health goals, resulting in gaps in healthcare service coverage [3–5]. Health community workers (HCWs) efficiently handle this issue and contribute to the development of community and primary healthcare systems [4, 6]. Health professionals and HCWs must work to prevent and detect stunting early [7]. HCWs, also known as *kaders* or cadres, are a broad set of community-based health workers who perform a wide range of roles and functions related to health promotion, community development, and healthcare delivery [4]. HCWs play a vital role in the development of strategies to overcome stunting. The roles and functions of HCWs in preventing and detecting stunting must be enhanced by providing regular guidance and stunting preventive training [7].

The active discovery of stunting cases in the community is one indicator of the success of the stunting *management* program. Stunting management programs in each region rely heavily on Public Health Centers (*Puskesmas*) as regional and community-based primary health care facilities. The empowerment of HCWs is a solution for supporting community stunting management programs. As an extension of the health center, HCWs are community members who have been chosen, trusted, willing, able, and have the time to find stunting suspects in the community [8].

Actions to prevent and decrease the incidence of stunting began several years ago by involving *Posyandu* (integrated service post) HCWs in the implementation of promotional activities for maternal and child health, particularly stunting, ranging from weighing, supplementary feeding, and early detection, but the participation of these HCWs has not been maximized because the lack of information received from health workers. Another issue is that HCWs do not know how to identify stunted children, and there is a shortage of both quality and quantity of HCWs [9].

Research showed that *Posyandu* HCWs training can improve knowledge, skills, and self-efficacy in preventing toddlers stunting. The development of HCWs can help to change attitudes toward early detection of stunting [8]. Nutrition education seeks to improve the quality of health by helping people change behavior related to health or nutrition, including knowledge, attitudes and practices. To help people avoid stunting, many health workers provide nutritional education. Because nutrition education using booklet media is interesting and lively, it will be easier for research subjects to learn [10]. Understanding of stunting by HCWs is a determinant of carrying out the functions, tasks, and roles of community-based stunting management. As a result, guidance is required to improve community-based stunting early detection skills [8]. Guidance and positive information from counselors can help change negative information. Additionally, counselors guide clients in decisions and attitudes that will help them overcome any nutritional problems they may be experiencing. The counselor's goal is to help clients make changes to eating patterns and/or health-related behavior [10].

Midwives are health workers who are qualified to contribute to reducing maternal and child mortality and stunting rates because they work directly with program objectives, which are women. Training is a systematic process of increasing skills, knowledge, and understanding, as well as self-motivation, in accordance with the needs of employees [11]. Understanding early stunting detection training on changing HCW attitudes are critical. The aim of this study was to see the effect of HCWs Counseling Program on the attitudes of HCWs toward early detection of childhood stunting.

2. Method

Study Design and Setting

We used a quasi-experimental with pre-test and post-test research design in working group 4 (POKJA 4) HCWs in Sumbersekar Village, Dau District, Malang Regency, East Java, Indonesia. Researchers conducted a pre-test before HCWs Counseling Program was provided. Furthermore, the HCWs Counseling Program was given for 3 times, with an interval of 1 week. Then a post-test was given 1 month after the last training program was given. The data collection method uses primary data, which is data obtained from respondents who directly provide information to data collectors. Primary data was obtained from HCWs in Sumbersekar Village, Dau. At this stage, HCWs will be directed to do a pre-test. The data will then be analyzed. The intervention given was upskilling HCWs in three sessions over two months, each lasting 60-90 minutes and including the following details:

1. Session 1 consists of interactive lectures, discussions, questions and answers on the concept of growth development and stunting.
2. Session 2 includes interactive lectures, discussions, questions and answers about the prevention of stunting in adolescence, pregnant women, breastfeeding mothers.
3. Session 3 includes interactive lectures, discussions, questions and answers about the concept of feeding babies and toddlers, standard anthropometric tools and early detection tools for child growth and development

After explained and reading the research information sheet, HCWs completed the informed consent form and then took the pretest before and posttest after the intervention. Based on references as supporting media, researchers compiled modules for stunting early detection

Study Participants

The respondents in this study were all HCWs in working group IV (Pokja IV) Sumbersekar Village, who were chosen using purposive sampling. Posyandu HCWs are separated into numerous working groups. The Health Program, Environmental Sustainability, and Health Planning are managed by Working Group IV (Pokja IV) [12].

Instrument Data Collection

We employed a questionnaire to examine the attitude of the HCWs in Indonesian. HCWs were asked twenty items using a four-point Likert scale, with 1 being strongly disagree and 4 being strongly agree[13].

HCWs attitude categories are divided into four [13], namely:

1. Excelent is $3{,}33 < \text{score} \leq 4{,}00$
2. Good is $2{,}33 < \text{score} \leq 3{,}33$
3. Fair is $1{,}33 < \text{score} \leq 2{,}33$
4. Poor is $\text{score} \leq 1{,}33$

Stasticial Analysis

The Wilcoxon test is a non-parametric statistical test to see the difference between two paired data samples, namely data from the same subject with two measurements. The first measurement (pre-test) is carried out before treatment and the second measurement (post-test) is carried out after treatment. The variables are said to have a significant relationship if the p-value is less than 0.05. Statistical analyses were performed using SPSS Version 24.

3. Result

The characteristics of the participants are shown in Table 1. A total of 40 HCWs from working group IV (Pokja IV) Sumbersekar Village completed the survey; 100% were women, 97,5% were married, 40% were 41-50 years old, 67,5% were housewife, 40% worked as HCWs for 0-2 years, 50% had a senior high school education and the majority (50%) had more than 5 time of HCWs' training.

Tabel 1. Participants Characteristic

Characteristics		n	%
Age (years)	20-30	6	15.0
	31-40	12	30.0
	41-50	16	40.0
	≥51	6	15.0
	Total	40	100.0
Sex	Women	40	100
	Men	0	0
	Total	40	100
Marital status	Married	39	97.5
	Widowed	1	2.5
	Total	40	100.0

Education level	Elementary School	4	10.0
	Junior high school	10	25.0
	Senior high school	20	50.0
	Bachelor	6	15.0
	Total	40	100.0
Occupation	Housewife	27	67.5
	Entrepreneur	6	15.0
	Farmer	4	10.0
	Employee	2	5.0
	Teacher	1	2.5
	Total	40	100.0
Work Length (years)	0-2	16	40.0
	3-10	11	27.5
	≥ 11	13	32.5
	Total	40	100.0
HCWs' training	0-1 times	13	32.5
	2-5 times	7	17.5
	>5 times	20	50.0
	Total	40	100.0

Table 2 shows the level attitude of HCWs about early detection of stunting before the intervention was 65% in good attitude, 30% in excellent attitude, and 5% in fair attitude. After the intervention, there was increase in excellent level attitude (50%), and good level attitude (50%). In table 2, it exhibited that Counselling Program has a statistically significant effect on attitudes toward early detection of stunting, with p value = 0.004.

Tabel 2. The Impact of HCWs Counselling Program On Attitudes Toward Early Detection of Stunting

Attitude category	HCWs' attitude pretest		HCWs' attitude posttest		p-value
	n	%	n	%	
Fair	2	5.0	0	0	0.004
Good	26	65.0	20	50.0	
Excellent	12	30.0	20	50.0	
Total	40	100.0	40	100.0	

Table 3 indicates that, the lowest pretest HCWs attitude was on the statement "When measuring a child's height, only the head and shoulders are against the wall" with an average score of 2.6 out of 4. Then after the HCWs Counselling Program, the statement remained the lowest, but there was an improvement from the pretest results, namely with a post-test of 3 out of 4.

Table 3. HCWs Attitude Statement on Early Detection of Stunting

HCWs' attitude statement	HCWs' attitude pretest	HCWs' attitude pretest

Posyandu HCWs performed the weighing using the steelyard balance with the correct steps although it was time-consuming	3,5	3,7
HCWs remove the child's jacket when weighing using the stepping scale.	3,3	3,5
If a child is fussy when being weighed, they are calmed down first and then weighed.	3,3	3,4
When using a steelyard balance or stepping scale, the arrow must be at 0 (zero).	3,4	3,5
The normal MUAC (Mid-Upper Arm Circumference) measurement for women of childbearing age is ≥ 23.5 cm.	3,2	3,4
Children under 2 years old can have their body length measured using a device called an infantometer.	3,1	3,3
When measuring a child's height, only the head and shoulders are against the wall.	2,6	3
The Growth Monitoring Card does not serve to record the child's dental growth.	3,2	3,4
If the Growth Monitoring Card is not filled in, the child's weight gain will not be known.	3	3,3
If the baby's weight increases, then the Growth Monitoring Card is marked with an N.	3,2	3,4
If there are pregnant women or mothers of children under five who do not regularly visit the *posyandu*, a HCW must remind them.	3,4	3,5
The HCWs gives permission to the mother of a toddler to go home after the services provided are completed.	3	3,3
One of the roles of HCWs at the posyandu is to assist the village midwife in counseling mothers under five.	3,2	3,2
Toddlers must gain weight according to the weight gain on the Growth Monitoring Card.	3	3,4
Toddlers are said to have gained weight if the weight chart on the Growth Monitoring Card follows the growth line.	3,3	3,3
The Growth Monitoring Card is something that mothers of toddlers must bring when they come to the posyandu.	3,4	3,4
HCWs carry out routine monthly activities at each *posyandu* location in turn.	3,2	3,5

4. Discussion

Community-based stunting prevention is carried out through the involvement of HCWs in the respective working areas. The active participation of HCWs in the stunting early detection and stimulation of growth and development in children at the *posyandu* contributes to the improvement of public health status. This is because one of the most effective ways to reduce stunting prevalence is through early prevention. *Posyandu* HCWs, as community representatives, play an important role in the implementation of effective interventions to reduce childhood stunting. As a result, they must meet the basic requirements, such as knowledge and skills, to maximize their respective roles, which are expected to improve optimally with high motivation [7]. Individual affective awareness in attitude was increased as a result of the learning process. Individual characteristics such as age, gender, occupation, and education influence the development of a person's attitude toward newly introduced values in a typical sample of adults [8]. The active role of HCWs is determined by age, education, occupation, and length of service, though age is an indirect factor [7].

This study exhibited that 40% of HCWs were 41-50 years old. Individuals' abilities and mindsets are influenced by their age. The ability of an individual's mindset to develop affects the attitude that is formed as they get older. Individuals of a more mature age will gain the trust of society more easily because they have more life experience [8]. The majority of the HCWs had senior high school education. The knowledge of a person is the result of a process of learning attitude and behavior through teaching and training, which is influenced by the individual's or their community's educational level [14]. Low-education HCWs have a more difficult time receiving guidance and information in stunting early detection [8].

The findings of this study exhibited that the attitude toward stunting and preventive measures before HCWs Counseling Program is relatively positive, possibly because HCWs attended district/city training and are supported by healthcare providers such as midwives and public health center nurses. HCWs are instructed on how to identify cases of stunting in the community [7]. *Attitude* is a positive or negative evaluative reaction to something; it has been demonstrated that knowledge and attitude can influence behavioral changes [15]. Attitude is a deeply embedded, consistent way of thinking about a concept or object. It could be either positive or negative. Attitude can influence performance, with a positive attitude leading to better performance. The action or process of carrying out or accomplishing an task, function, or action (for example, HCWs' performance in early childhood stunting detection). The majority of performance issues can be attributed to a lack of skills, unclear expectations, a lack of resources or equipment, or a lack of motivation [8]. The role of HCWs in relation to child nutrition problems, particularly stunting, is to conduct early detection by properly measuring and weighing the height or weight of children on a monthly basis and recording on the Health Monitoring Card (*Kartu menuju Sehat*) at *Posyandu*. HCWs also educate parents on the characteristics of stunted children as well as preventive measures. Furthermore, HCWs take a critical part in disseminating health information about risks and effects of stunting in order to reduce the risk in children under the age of five in the community [7].

This study findings showed that the lowest pretest-posttest HCWs attitude was on the statement "When measuring a child's height, only the head and shoulders are against the wall". A simple random error in height measurement can exponentially

increase the dispersion and thus inflate the estimate of the undernutrition indicator based on the standard deviation [16]. To ensure reliability and accuracy, the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC) have implemented standardized procedures for measuring body height [17]. Height assessment is a non-invasive, easily accessible measurement that can aid in the identification of children at risk of malnutrition or obesity. However, there is still a need for universal and accurate height measurement. Only 30% of height assessments were accurate (within 0.5 cm of the height obtained by a trained anthropometrist) in a multicenter randomized trial in primary care practices in the United States. Inpatient settings, the accuracy rate is even lower [18]. In anthropometric surveys, age misreporting and inaccurate height recording are common, resulting in height-for-age Z-score (HAZ) errors. Height measurement is prone to measurement errors by enumerator or HCWs, particularly for younger children [19]. Therefore, it is very important that HCWs are always given training or counselling programs in early detection of stunting, especially in measuring children's growth.

Improving the attitude of HCWs towards early detection of stunting on children is very essential. The finding of this research showed that that Counselling Program has a statistically significant effect on improving attitudes toward early detection of stunting. The goal of training is to improve specific knowledge and skills so that HCWs can carry out their responsibilities properly and in accordance with standards [9]. Training/counselling for HCWS helps promote changes in HCWs' attitudes, allowing them to independently apply the counselling program they have received in the community. Training/coaching/counselling is one of the factors that influence attitudes because it can enhance HCWs' knowledge and skills, ensuring that health HCWs' attitudes and knowledge are consistent [8].

The increased attitude of HCWs is expected to improve early detection of stunting so that children who are stunted and at risk of stunting can be handled immediately. Future study should identify self-efficacy, knowledge, perceptions, skills, HCWs behavior, and identify other interventions in community-based that can improve early detection and prevention of stunting.

5. Conclusion

HCWs Counselling Program has a statistically significant effect on improving attitudes toward early detection of stunting. Improving HCWS attitudes toward early detection of childhood stunting is critical because they play an essential part in the delivery of effective interventions to reduce stunting in children. Further research needed to identify other interventions in community-based that can improve early detection and prevention of stunting.

6. Conflict of Interest

The author(s) declared no conflict of interest.

7. Acknowledgment

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