

The Capacity of Posyandu Cadres Through Complementary Food for Children by Training

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Abstract Nutritionist from Center of Public Health Beji stated that there are still many cadres who have not participated in training on complementary foods for children under two years (baduta). Likewise, nutritional counseling is rarely done in Integrated Services Post (Posyandu) because of the limited knowledge and resources of adequate cadres. The results of research findings in the Depok city area showed that the mothers have knowledge about nutrition and complementary children's foods is still lacking. The community service program was carried out in the form of training involving 10 Posyandu represented by 28 cadres from Beji and East Beji Villages. The cadres' engagement method is in a form of training. The purpose of training is to improve the nutrition, knowledge of complementary foods for children, and the skills of cadres in information & education, and counseling. The training took place on 29-30 August 2019. The facilitator from the Depok City Health Office, Center of Public Health Beji, and Universitas Indonesia. Cadres practiced information & education in Posyandu with the target of 129 infant mothers and counseling for twenty mothers under two years of children. The success of training is measured through pre-test and post-test for cadres and observations of skill cadres. An increase in cadre knowledge score after training by 11 points and category knowledge of cadres are sufficient and good. The results of cadre observations while information & education showed there were still shortcomings in terms of verbal reinforcement skills and fun activities such as singing. Cadre counseling activities still need to be improved in terms of conducting studies such as looking at maternal as child health books also recording counseling results. Training of cadres can improve the knowledge of complementary foods and skills of communication & education also counseling for the mother's baduta

1. INTRODUCTION

According to WHO (2006), complementary foods (MP-ASI) is another food when breast milk alone does not adequately meet the needs of the baby's intake, therefore it takes food and other fluids together with breast milk. Food is one of the factors that directly affect the nutritional status and health of children in addition to infectious diseases (UNICEF, 1990; Martins et al., 2011). The mother's lack of knowledge about the baby and child food baduta causes the feeding of the children is not right either the time it was first given, the type, quality, or quantity.

As a result, children experience nutritional imbalance further, in the long term the child is malnourished.

Nutritional disorders that occur in the first 1000 days of life (1000-HPK) from conception until the child is two years old result in impaired growth of children at a later age, even when adults are at risk of suffering from degenerative diseases (Barker, 2008). The results of Sudiarti's research (2017) in the Beji region, Depok City showed that more than 50% of babies got early complementary foods (< 6months). This condition is not in accordance

with the recommendations of WHO (2006) and Kementerian Kesehatan (2011). Other results on average infant micronutrients, especially iron and zinc, which are essential for the growth of the baby, are not in accordance with the recommended nutritional adequacy. Infants who get early of complementary foods are more at risk of stunting and stunting events begin in infants aged 7 months. Research by Teesema *et al.*, (2013) and Saaka *et al.*, (2015) show that early introduction of complementary foods increases the risk of stunting in children. The practice of administering complementary foods in children aged 6-24 months is not appropriate in quality, quantity also frequency of feeding is one of the factors that cause malnutrition (UNICEF, 2013; Bhutta *et al.*, 2013).

The results of training at the Pengasinan Center of Public Health (CPH) area showed that the training of Posyandu cadres on complementary foods and growth can increase the knowledge of cadres and mothers of infants also mothers of children under two years old (Sudiarti *et al.*, 2018). Therefore, the community services team wants to expand these activities in other regions, namely the Beji CPH which fosters Posyandu cadres of Beji and East Beji Village. The area is bordered by the Universitas Indonesia, approximately 2-3 km from campus.

Posyandu is one of the activities of by and for the community in basic health service efforts. The role of other Posyandu is to improve and educate the public in order to improve the degree of health (Kemenkes, 2012). To achieve this goal requires the role of cadres. The targets of Posyandu services are children, pregnant women, nursing mothers, and women of childbearing age. Cadres are required to have knowledge and skills in order to support their duties. One of the duties of cadres is to provide information & education and counseling related to food, parenting, and health. Cadre is one of the supporters of success in feeding infants and children.

The results of discussions with the Nutritionist of Beji CPH in June 2019 stated that there are still many cadres who have not participated in training on complementary foods for children. Likewise, nutritional counseling is rarely done in Posyandu because of the limited knowledge and resources of adequate cadres. Therefore, increasing the knowledge and skills of cadres in information & education, and counseling about complementary foods for children is needed. Expected cadres who have been trained can educate the baduta's mother in complementary feeding children as well as the growth of the children. The CPH Beji is located at Bambon Raya street number 7B RT.01 / RW.01 Beji Village, Beji Subdistrict, Depok City. CPH service area includes Beji Village and East Beji Village which borders the location of Universitas Indonesia. Posyandu which is under the construction of Beji CPH as many as 34 with various strata (Dinas Kesehatan Kota Depok, 2018).

Based on the analysis of the situation that has been presented, the community service team conducted training for Posyandu cadres of Beji and East Beji Village as a working area of Beji CPH. The purpose of training is to increase cadre knowledge in terms of nutrition and foods for children, information & education,

also counseling skills for baduta's mother, especially related to complementary foods and child growth.

2. METHOD

2.1 Method, Location, Time, and Duration of Community Service

The intervention method used in community service is training and designing one group pretest-posttest. The targets are Posyandu cadres of 10 from Beji and East Beji Villages. The number of Posyandu and the number of cadres of each Posyandu are determined by the head of CPH. Inclusion criteria Posyandu are active for the last 3 months and have minimal 5 cadres. There are twenty-eight people from two vilages as the Posyandu's trainee. The way of delivering material with lectures, discussions, video playing, practice, and role-playing. Facilitators come from the Depok City Health Office, Faculty of Psychology, and Faculty of Public Health, Universitas Indonesia. Training materials include 1) Nutrition and Health Problems of Children Under Five Years in Depok City, 2) Parenting of Children; 3) Nutrition and Complementary Foods, and 4) Information & Education and Counseling. The training was conducted in August 2019 in the hall of Puskesmas Beji. Duration each material 90 minutes for presentation and discussion. Video measurements of body length and height and weighing through from Ministry of Health Republic Indonesia. The first day of training is used for presentation & discussion, and the second day of training is used for skills training through the practice of measuring length, height, and weight. The practice of information & education and counseling using methods role-playing conducted on the second day of training. Each activity's skill training time is 120 minutes. Educational media used in training are complementary foods module books, pocket books, and flip chart which was designed by the community service team and has been used in previous community service activities in 2018. Another media, such as Growth Monitoring Chart (KMS) and the video of measuring body length/height and weight weighing of infants and children are developed by the Ministry of Health of the Republic of Indonesia.

Community engagement activities include several stages are 1) socialization of activities at Beji CPH; 2) permit management and ethical clearance; 3) training, and 4) cadre assistance by community service teams. The training activity is located in the Beji CPH hall on August 29 – 30, 2019. Community service activities from May 2019 to November 2019. Information & education and counseling activities are adjusted to the time agreed by cadres and mothers. The goal of information and education is 15 mothers of children aged 6-24 months and the target of counseling one or two mothers of children aged 6-24 months for every Posyandu.

2.2 Data Collection and Data Analysis

Evaluation of community service activities using indicators of an increase in cadre knowledge scores and observation of information & educationing, and counseling activities using a checklist. To find out the level of knowledge cadres used questionnaires containing 25 questions with right or wrong answers.

Questionnaires have been tested and used in community service activities at CPH of Pengasinan, Depok in 2018. If the correct answer is given a score of 4 and when the wrong answer is given a score of 0. The range of knowledge scores varies from 0-100. When a score of < 60 is expressed less knowledge when a score of 61-80 is declared sufficient and 81-100 is declared good knowledge. Pre-test and post-test are performed on trainees to find out quantitative changes in knowledge before and after training. Statistical tests to see the difference in average scores are used in paired t-tests with $p < 0.05$. Cadre skills in information & education are observed using a checklist of several skills from aspect 1) opening counseling, 2) explaining, 3) strengthening, 4) managing counseling, 5) variations, and 6) closing skills. The results of observation of cadre practice in counseling using a checklist. The results of observations of cadres conduct counseling using a checklist of various aspects such as 1) opening, 2) assessment, 3) establishing nutritional problems, 4) implementation of counseling, 5) and communication.

2.3 Ethical Review

Community service activities have passed the ethics review based on a letter from the Research and Community Service Ethics Commission of the Faculty of Public Health, Universitas Indonesia Number: Ket-612/UN2.F10/PPM.00.02/2019, dated August 19, 2019.

3. RESULT AND DISCUSSION

3.1 Complementary Food Training

3.1.1 Characteristics of Cadres

Cadre characteristics include age, formal education, and long-standing cadres presented in Table 1. Based on the table, more than half of respondents aged 36-50 years (53.6%) and two people already belong to the elderly group (7.1%). The age of Posyandu cadre has a wider range of 25-61 years compared to previous studies of 25-40 years (Zaki *et al.*, 2018). The results of interviews with cadres stated that the wide age range is because it is very difficult to find a replacement cadre of fewer than 30 years old. The majority of cadres graduated high school (67.9%) and there were two highly educated (7.1%) people. Most cadres have been in charge for 1-10 years (78.6%). There are no specific requirements for becoming a cadre of both age and education. This is thought to cause a wide variety of formal education and the length of time to become a cadre. More cadre membership starts from a person’s concern for social health and soul to serve the community.

3.1.2 Knowledge Complementary Foods of Cadres

The results of pre-test and post-test are used as indicators of success in increasing cadre knowledge of complementary foods, nutrition, and growth. The results of the measurement of cadre knowledge before training and after training are presented in Table 2. All trainees were asked to answer 25 questions that included knowledge of quality, quantity, consistency as well as complementary foods frequency, nutritional knowledge, and child growth knowledge. Each question is given a score of 0 if the respondent is not answered or the answer is wrong. When the answer to the question is correct it is given a score of 4.

The range of question-answer scores of respondents varies from 0-100. The results of the paired test analysis showed meaningful differences in average knowledge scores before and after cadres took training. An increase in knowledge score of 11 points is statistically meaningful ($p < 0.05$). Training can increase cadre knowledge about complementary foods, nutrition, and growth. This result is in line with Lubis & Syahri (2015): Zaki *et al.*, (2018) state that cadre training can improve knowledge and skills.

Table 1. Characteristics of cadre.

Variable	N=28	%
1.Old (years)		
25-35	4	14.3
36-50	15	53.6
51-65	9	32.1
2.Education		
Low (graduated elementary/secondary school)	7	25.0
Middle (graduated high school)	19	67.9
High (graduate bachelor)	2	7.1
3. Duration being a cadre (years)		
1-10	22	78.6
11-25	5	17.9
26-35	1	3.5

Table 2. Results of pre-test and post-test of cadre knowledge.

Variable Knowledge	N	Mean	SD	Min	Max	p
Pre-test	28	70.9	7.68	60	92	0.031*
Post-test	28	81.9	8.40	68	100	

* $p < 0.05$ = significant

In general, no cadre has a lack of knowledge about nutrition, complementary foods, and child growth prior to training. There was a sufficient increase in knowledge to be good as much as 14.3% after training (Figure 1). Some knowledge that still needs to be improved includes the type of complementary foods according to the age of the infant and the child growth graph.

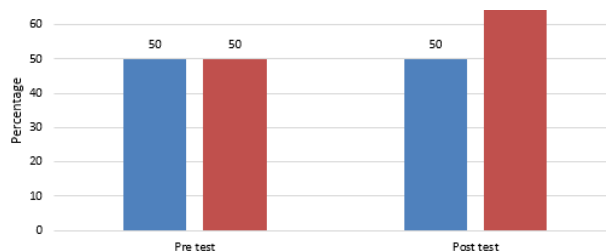


Figure 1. Cadre knowledge level on pre-test and post-test

3.2 Cadre Assistance

Assisting activities to observe and provide correction of cadre skills information & education or counseling to baduta’s mother. In addition to this, if the participant asks a question, but the cadre has not been able to answer the question then the service team will help answer. Assistance in counseling is carried out in Posyandu or Mushola or other places that have been determined. The duration activity is approximately 120 minutes,

starting with a welcome event, information & education, discussion, and ending with the closing and handing of souvenirs. The goal of counseling reached 129 (86%) baduta mothers from the target of 150 on 10 Posyandu. The extension target was not achieved for several reasons: 1) the number of baduta less than 15 people per Posyandu, 2) the mother's baduta were not present when invited for various reasons, and 3) the cadres were not ready for information & education. Counseling is preferred to the baduta's mothers who have problems such as the child are often sick, the child's weight does not rise, the child's length/height is not appropriate for age. Counseling was conducted in less than 20-30 minutes for each mother.

3.3 Cadre Skills

The observations of 13 cadres who did information & education showed good confidence and had dared to do that. Cadres who participated in the training took turns informing the baduta's mother in their respective Posyandu (Figure 2). The results of information & education observations conducted by cadres show there are still some things that need to be improved. These aspects include verbal reinforcement skills, such as giving good, great, precise, praise, and so on; strengthening with fun activities such as singing, dancing, etc.



Figure 2. Cadre information & education baduta's mother

Other aspects need to be improved in the variety of use of extension media such as the use of the flip chart, groceries, pocketbooks, food models, or videos. Another skill that needs to be improved is also closing the extension by repeating conclusions and arousing the motivation of participants to learn more. The results of observation of cadre's skills in counseling are presented in Table 3.

The results of cadre observations to counsel baduta's mother are quite encouraging, there are 20 cadres who counseled baduta mothers with a target of 20 baduta's children. Some of the problems faced by baduta's mother are children who have difficulty eating, children often cough up, colds, children's weight is unstable, children do not like to eat vegetables or fruit, and children often eat snacks that are less nutritious. The results of observations of cadre counseling with baduta's mother are presented in Table 4.

Some things that need to be improved cadres in counseling skills include 1) assessment by looking at the Mother-Child Health book (KIA Book) or Growth Monitoring Cards (KMS), 2) implementation of counseling such as recording counseling data, 3) and discussing obstacles that arise. In general, cadres can already do counseling, but it needs to be done repeatedly on Posyandu activities that take place every month to improve skills and confidence.

It can be concluded that cadre training can help cadre skills in information & education, and counseling. Previous research states that training can improve the ability of health cadres (Sianturi et al., 2013).

Table 3. Result of observation of information & education cadres.

Number	Observed Process	N=13	
		n	%
A	Open Information & Education		
1	Greeting and a pleasant atmosphere	13	100
2	Explain the purpose of counseling and the stage of counseling	13	100
B	Explaining Skills		
3	Explain the material to be given	10	76.9
4	Use of examples	9	69.2
5	Feedback (asking, re-describing the material obtained)	11	84.6
C	Strengthening Skills		
6	Verbal reinforcement (good, precise, great, amazing, etc).	3	23.1
7	Strengthening with fun activities (dancing, singing)	2	15.4
8	Strengthening with a symbol (thumbs up, nodding)	10	76.9
D	Skill to Manage Information & Education		
9	Making jokes, games, responding the target conditions	8	61.5
10	Pay attention to the entire target	12	92.3
E	Skills variations		
11	Variation in media (audio visuals, model objects)	3	23.1
12	Variation the extension style (sound, variation of viewing contact)	9	69.2
F	Skills to Close		
13	Repeating the essence of extension (conclusion)	10	76.9
14	Generating target motivation to learn more	6	46.2

3.4 Self-Evaluation

Each completed user assistant in this case Posyandu cadres and CPH representatives is asked to fill out a questionnaire of the satisfaction of the beneficiaries. the implementation of the Universitas Indonesia community service program in 2019. The evaluation results showed the target recipient felt appropriate and satisfied with community service activities. Some suggestions include training that can be held again for other cadres who have not participated in training or other Posyandu. In addition, users want training with other materials such as lactation management, measuring the child's height and weight. can improve the knowledge and skills of cadres to conduct information & education, and counseling about complementary foods, nutrition, and child growth to the infants and baduta mother. Advice for cadres needs to often practice information & education and counseling on Posyandu so that skills and trust increase.

Table 4. Result of observation of counseling cadres

Number	Observed Counseling Process	N=20	%
A	Unveiling		
1	Say hello and introducing	20	100
2	Creating a comfortable atmosphere for the client	20	100
3	Explained the purpose and process of counseling	20	100
B	Assessment		
4	View Mother - Child Health Books (KIA)	7	35
5	Identifying a child's diet	18	90
6	Reviewing a child's history of disease	16	80
7	Reviewing a child weight changes	19	95
8	Reviewing child parenting	15	75
C	Establishing nutrition issues		
9	Explain the results a good nutritional study	16	80
10	Explain the results of nutritional that need to be improved	15	75
D	Implementations of nutrition counseling		
11	Giving children food recommendations	17	85
12	Discussing dietary changes following the advice		
13	Discussing the obstacles that a rise in implementing eating recommendations	6	30
14	Re-advocate for nutritional counseling		
15	Record counseling data	4	20
E	Communication		
16	Using language that is easy for the client to understand	18	90
17	No judging /patronizing clients	17	85
18	Maintain eye contact with clients	20	100
19	Give clients the opportunity to ask and answer question appropriately	18	90
20	Close communication with courtesy and speech that excites the clients	20	100

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