

## Curves as a Media For Training (Cadre Skills in Anthropometric Measurements as a Preventive Measure For Stunting)

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### Article Info

#### Keywords:

Education,  
Anthropometrics

### ABSTRACT

Skills in anthropometric measurements are one of the skills that every cadre must master and possess to monitor the growth and nutritional status of toddlers. This service activity aims to increase cadres' knowledge and skills in carrying out anthropometric height measurements that are easy to understand and apply in Posyandu activities. This activity is supported by an innovative height measuring tool that has been designed and is equipped with a pocket book and poster. The counseling technique was carried out using lecture and panel discussion methods to 32 cadres from 7 Posyandu, namely Posyandu Mekar Asih 1, Mekar Asih 2, Rido Asih, Fajar Sidik, Bahagia, Wargi Saluyu, and Rahayu. Based on the results of the paired parametric T comparative statistical test, it shows that there is no significant difference between the infantometer and the curve device ( $p > 0.05$ ). however, there was a significant difference between the stadiometer and the Curve device ( $p < 0.05$ ).

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## INTRODUCTION

Indonesia is currently facing a double nutritional problem or what is called the Double Burden of Malnutrition which includes deficiencies and excess intake of nutrients. Malnutrition consists of stunting, wasting and underweight, as well as micronutrient deficiencies, while excess nutrition consists of overweight and obesity which can cause non-communicable diseases (NCDs) (World Health Organization, 2020). Stunting is a major nutritional problem that occurs in Indonesia. Basic Health Research states that the prevalence of children under five in Indonesia in 2010 was 35.6% and in 2013 it was 37.2%, and most recently, based on the 2021 SSGI, the prevalence of stunting was still above 20%, namely 21.6% (Ministry of Health of the Republic of Indonesia, 2022).

Karawang Regency is one of the priority areas in the stunting management program. Kutagandok Village is one of the villages in Karawang Regency which is included in the stunting locus. Based on the Karawang District Health Service (2022), the number of stunted toddlers in 2022 at Posyandu in Kutagandok will be 14 children. This number is greater than the number in other villages, such as Tirtajaya District (8 children) and

Pakisjaya District (3 children). Meanwhile, the prevalence of stunting in Karawang district and West Java province in 2021 is 20.6% and 24.5% respectively (Ministry of Health, 2022).

Stunting assessment is carried out by measuring the toddler's height. Posyandu cadres have an important role in carrying out early detection of stunting in an area so that improvements can be made as soon as possible. Skills in anthropometric measurements are one of the skills that every cadre must master and possess to monitor the growth and nutritional status of toddlers (Purwaningtyas and Fitriani, 2020; Imantika et al, 2021). Imantika et al (2021) stated that training Posyandu cadres on anthropometric measurement skills can improve efforts to prevent stunting.

Research conducted by Purwaningtyas and Fitriani (2020) states that counseling and training for Posyandu cadres can be effective in increasing knowledge and skills regarding anthropometric measurements. However, provision regarding the correct way to measure the height of toddlers by cadres is still very minimal. This also takes into account the main tasks of the five Posyandu tables which do not include height measurement as one aspect of monitoring. Therefore, there needs to be an effort to improve cadres' skills in carrying out anthropometric measurements, especially on the height of toddlers.

Providing cadre training on height measurement is also increasingly important considering the data asymmetry between national research data and electronic data - community-based nutrition recording and reporting. According to Riskesdas (2018), the prevalence of stunting in Karawang Regency reached 20.6%, whereas according to the e-PPGBM application it was only 9.6%. Riskesdas is the result of a study conducted involving trained enumerators in data collection, but e-PPGBM data was obtained through Posyandu reports, most of which came from cadre measurements.

Purwaningtyas and Fitriani (2020) stated that the low knowledge and skills of Posyandu cadres in anthropometric measurements greatly influenced validation data and inaccurate reporting of nutritional status. Until now there is no practical guide that can be used by cadres to measure height or body length validly. Based on the description of the problem, the proposer is interested in providing community service to improve the skills of Posyandu cadres in measuring height through training as an effort to ensure the validity of national stunting data using CURVA media.

## METHODS

The method for implementing this student creativity program is carried out at the Posyandu which is in the working area of the UPTD Kutamukti Health Center in Kutawaluya sub-district, Kutagandok village. This community service begins with conducting an assessment of the situation and condition of the cadres at the targeted Posyandu by giving a pretest to the cadres and observing the skills possessed by the cadres during anthropometric measurements. The aim of this study is to see and analyze the problems faced by the cadres and the main solutions in solving them. the problem.

The next activity is providing stimulus in the form of training by actively involving all cadre members. Training was conducted for cadres regarding anthropometric measurement

methods and their implementation in CURVA media. Apart from that, the training functions to improve cadres' ability to deal with confusion when carrying out anthropometric measurements so that cadres can be more independent in applying appropriate technology, especially in the use of CURVE media. The training also contains a posttest and practice in using CURVA media which of course is accompanied by the team in its use. Apart from using CURVE media, cadres are also given assistance in using anthropometric tools for measuring height and body length available at the posyandu.

Furthermore, it will be evaluated at the end of the activity and assistance during the implementation of Posyandu activities. This evaluation activity begins with a 10 minute pretest. After the pre-test, cadres are given education for 1 hour consisting of 45 minutes of lecture and 15 minutes of panel discussion. The material presented is in the form of an introduction to measuring instruments found in posyandu, appropriate anthropometric measurement methods, implementation of CURVE media. After the question and answer session is finished, the cadres then take the posttest for the same time as the pre-test. The pretest and posttest questions consist of 10 multiple choice questions asking about all the material presented during the education.

## RESULTS AND DISCUSSION

This community service activity was attended by Posyandu cadres from Kutagandok Village who came from 7 Posyandu, namely Posyandu Mekar Asih 1, Mekar Asih 2, Rido Asih, Fajar Sidik, Bahagia, Wargi Saluyu, and Rahayu. Every cadre from this Posyandu becomes a PKM partner because based on the survey results stated by representatives of Posyandu Mekar Asih 1 cadres, most of the cadres do not have standard height measurement skills, these cadres do not have anthropometric measurement skills, especially correct height and body length. .

One of the causes behind inadequate skills is a lack of support with training (Anthropometry et al., 2020). Through this community service activity, cadres are given stimulus in the form of training by actively involving all cadre members. Training was conducted for cadres regarding how to measure anthropometry and its implementation in the media. The CURVE of cadres' skills in measuring height and body length showed an increase from 51% to 70% after being given education on measuring body length. Then, height measurement increased from 72% to 92%.



**Figure 1.** Graph of Improving Skills of Posyandu Cadres After Curve Media Training for 32 Cadres



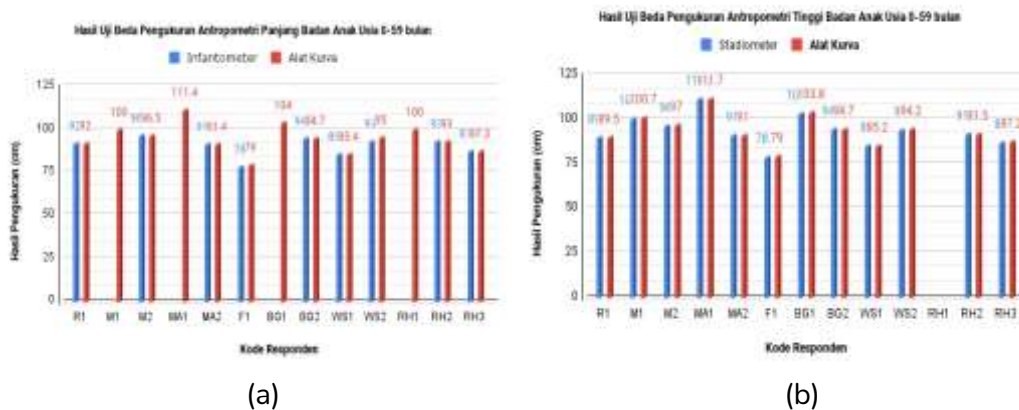
**Figure 2.** (a), (b), (c) Conditions during training

The low level of cadre skills in measuring requires encouragement to carry out cadre training and counseling (Roles et al., 2010). The existence of this CURVE media is very appropriate to be used as a medium to improve the skills of posyandu cadres in anthropometric measurements.



**Figure 3.** Graph of Increased Knowledge of Posyandu Cadres After Curve Media Training for 32 Cadres

The activity then continued with training which served to improve cadres' abilities in dealing with confusion when taking anthropometric measurements. This must be considered so that measurements are more precise and accurate (Hayati & Fatimaningrum, 2013). Training was conducted for cadres regarding anthropometric measurement methods and their implementation in CURVA media. With results of 81% before being given training to 89% after training on anthropometric measurements.



**Figure 4.** Graph of Improvement in Height and Length Measurement Skills After Curve Media Training

### CONCLUSION

Community service activities using CURVA media can provide knowledge and skills for cadres in Kutagandok Village. The accuracy of the media is also an indicator of the success of this activity with a value of  $p = 0.161$  for body length and  $p = 0.200$  for height, these values are not statistically significantly different. ( $p > 0.05$ ). Evaluation monitoring is needed to determine long-term skills.

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