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# CADRE'S ABILITY TO USE ANDROID-BASED STUNTING PREVENTION APPLICATIONS

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**ABSTRACT**
Stunting is a form of malnutrition which is measured based on the 2005 WHO standard deviation. Stunting can be assessed by measuring the height and age of H/A according to the WHO child growth standard, that is, if the z-score H/A is <-2 SD . Health cadres need an application to make it easier to record, report, and prevent stunting. This study was to determined the effectiveness of the ability of cadres to use android-based applications for stunting prevention. This study used a quantitative study with a quasi-experimental design using a pre post test without a control group. The sample of this research is health cadres in Banyubiru Village and Ambarawa District, Semarang Regency, Central Java with a total sample of 120 respondents used purposive sampling technique. The research instrument used a questionnaire. Our bivariate data analysis ed Wilcoxon test. The results showed that there was an increase in the ability of cadres to use android-based stunting prevention applications, with a *p value of* 0.0001. cadres who have wanted the application need to be continuously empowered, and the use of the application can be used continuously.

**Keywords**: cadres; prevention; stunting; android application

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## INTRODUCTION

Stunting is a chronic nutritional problem characterized by short stature. Generally, sufferers are susceptible to disease, intelligence below normal, and low productivity [1]. Stunting is a condition of growth failure in children which is marked by a Z-score in the category of height according to age under -2 SD. Stunting is a chronic nutritional problem due to lack of nutritional intake in the long term (Musyarofah, 2022). Based on data from the SSGBI in 2021, the prevalence of stunting under five in Indonesia decreased from 2019 to 2021, from 27.67% to 24.4%. The prevalence of stunting in Central Java in 2021 is 20.9. Stunting in Semarang Regency is 16.4 (Ministry of Health, 2021).

In an effort to reduce the prevalence of stunting, the government issued a program to make it happen. Therefore, it is urgently needed a research that can comprehensively present the stunting prevention program in Indonesia, to be useful for the government in making policies regarding more precise and efficient stunting prevention programs (J et al., 2022). The prevalence of stunting in Indonesia is still a serious and even serious public health problem to be tackled. Health cadres play an important role in reducing stunting prevalence through stunting detection and education and health for mothers of children under five during Posyandu activities (Simbolon et al., 2021) .

Health cadres or also called village cadres, posyandu cadres or PKK cadres are village officials who love to empower their own communities for the sake of improving community welfare, mostly in the field of health. health. The role of health cadres in stunting prevention includes the provision of supplementary food, distribution of vitamin A, counseling on nutrition issues, home visits, and also as health promoters in the community. Structured and comprehensive cadre empowerment can support an increase in public health status (Vinci et al., 2022).

Posyandu is a form of Community Based Health Efforts (UKBM) which is managed by, for, and with the community, in order to empower the community and provide convenience to the community in obtaining basic health services. Efforts to increase the role and function of Posyandu are not solely the responsibility of the government, but all components in the community, including cadres. The role of cadres in the implementation of Posyandu is very large because apart from providing health information to the community, it is also a driving force for the community to come to the Posyandu and carry out clean and healthy living behaviors. Posyandu is a form of Community Based Health Efforts (UKBM) carried out by, from and with the community, to empower and provide convenience for the community to obtain health services for mothers, infants and toddlers (Indarjo, nd)

## METHOD

This research were a quantitative research. The research design was a quasi-experimental, *one group pre-test post-test design* . The sample of this research is cadres in Banyubiru and Ambarawa sub-districts, Semarang district, Central Java by using purposive sampling as many as 120 respondents. The intervention carried out was by educating and training cadres in using android-based stunting prevention applications. The research instrument used several questionnaires. The questionnaire contains questions to see the knowledge and ability of cadres in using android-based stunting prevention applications. The study was conducted in Semarang Regency from January to July 2022. Data analysis used the Wilcoxon test . This research has passed the ethics code number 013/EC/KEPKSTIKES_Kendal/I/2022.

## RESULTS

Table 1.
Distribution of Cadre Capabilities Month 1 (n=120)

| Variable | | f | % |
|---|---|---|---|
| cadre ability | low | 71 | 59.2 |
| | currently | 47 | 39.2 |
| | tall | 2 | 1.7 |

This research is looking for *a pre-test post-test design group* by offering intervention after doing the pretest. Intervention Methods by providing education and training in using android-based stunting prevention applications. The result of the research is the difference in replying to the pre - post test scores . Based on the univariate analysis in table 1, namely the first measurement in month 1, the frequency distribution of the ability of cadres in the low category is 59.2%, the medium category is 39.2% and the high category is 1.7%). Meanwhile, in the 6th month of measurement, the results showed that the frequency distribution of the ability of cadres in the medium category was 50% and the high category was also 50%.

Table 2.
Distribution of Cadre Capabilities Month 6

| Variable | | Frequency | Percent |
|---|---|---|---|
| cadre ability | Currently | 60 | 50.0 |
| | Tall | 60 | 50.0 |
| | Total | 120 | 100.0 |

Based on the Wilcoxon test of 120 respondents, the results obtained p value = 0.0001. Then there can be keywords that there are differences in the average value of the ability of cadres in using android-based stunting prevention applications before and after being given education and training.

Table 3.
Wilcoxon Test Results

| | cadre ability month 6 - ability cadre month 1 |
|---|---|
| Z | -10,438 [b] |
| sour. Signature. (2-tail) | .000 |
| a. Wilcoxone Marked Rating Test | |
| b. Based on negative ratings. | |

**DISCUSSION**

The achievement of the global stunting reduction target by 2025 must begin by conducting an analysis of the number of children under five who experience stunting and assessing the factors that cause stunting in certain geographic and social contexts. Justice-based policies targeting the most vulnerable populations are an effective strategy to reduce stunting rates (Sulistyawati & Widarini, 2022). The results of the study are in line with research in Tegallinggah Village, Buleleng Regency, intervention was carried out with training using a web-based application to access information on early stunting detection. the use of web-based applications has an effect on increasing knowledge of posyandu cadres in early detection of stunting with a significance value of $p<0.05$ (Anjani et al., 2022)

Toddlers who experience nutritional disorders in the long term will be very dangerous to become stunted toddlers. Under-five stunted can be detected early through assessment of nutritional status in posyan activities. The problem experienced by cadre mothers is the limited knowledge of cadre mothers only in detecting stunting in toddlers so that cadre mothers take measurements of height, weight, and age ( Muflihatin et al., 2021). One of the pillars of the Strategy to Accelerate Stunting Reduction - the importance of convergence of Specific and Sensitive Nutrition interventions at the Central, Regional and Village levels. Stunting is a growth disorder and development brain on child which caused because deficiency intake nutrition in long time, infection repeated, and not enough stimulation psychosocial (Endrekson & Tania, 2021).

This research also hampers the search for Herlina, namely the monitoring of children's growth and development is routinely carried out through the Posyandu. Posyandu cadres KNOWLEDGE about monitoring children's growth is important to improve early detection of malnutrition to prevent stunting in children. Training and mentoring activities for cadres in using WHO standard anthropometric software can improve cadres' performance in monitoring children's growth (Rokhaidah & Herlina, 2021) . Training activities on the use of network information system applications without stunting can improve the knowledge,

attitudes and skills of posyandu cadres in using the application (Setiana Andarwulan et al., 2020).

## CONCLUSION

Posyandu cadres are the spearhead of public health. In the effort to prevent stunting, an application is needed for ease of implementation and improvement of surveillance. It is necessary to increase the knowledge and ability of posyandu cadres in preventing stunting. One of them is through the use of android applications. From the results of this search, it was found that there was a difference in the average value of the ability of cadres in using android-based stunting prevention applications before and after being given education and training. It is necessary to conduct regular and periodic training for posyandu cadres related to stunting. There needs to be innovation in improving the capacity of cadres.

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