

**THE EFFECTIVENESS OF DENTAL HEALTH CADRE TRAINING ON
INCREASING THE KNOWLEDGE OF RURAL COMMUNITY DENTAL
HEALTH EFFORT (UKGMD) IN KARANGTENGGAH VILLAGE,
BATURRADEN DISTRICT**

**Riski Amalia Hidayah¹⁾, Fitri Diah Oktadewi¹⁾, Inneke Cahyani¹⁾, Bambang Tri
Hartomo¹⁾, Naila Robbaniyya Fithriyya¹⁾**

1) Dentistry, Medical Faculty, Jenderal Soedirman University,
Purwokerto
e-mail: riski.hidayah@unsoed.ac.id

ABSTRACT

The Rural Community Dental Health Effort (UKGMD) is one of the breakthrough efforts or strategies to assist the community in reaching dental health services that have not been implemented yet and encourage the community to provide dental health services at the nearest health service. Dental and oral health survey data for the people of Karangtengah Village, Baturraden District in 2019 show an average Decay, Missing, Filling-Teeth (DMF-T) index is 13,12 which is classified as a very high category according to World Health Organization (WHO). This research uses a type of pre-experimental research with the research design used, namely one group pre and post-test design without a comparison group. The cadre training activities were attended by 28 representative cadres from 7 posyandu in Karangtengah Village. Training activities include providing material through audio-visual forms and practice accompanied by the team. The assessment of this activity is carried out through the results of the pretest at the beginning of the activity session and the posttest assessment at the end. The results of the pretest and posttest showed an increase in the average knowledge score of cadres from 7.92 ± 1.56 to 8.85 ± 0.57 . The paired t-test statistical test showed that there was a significant difference between the level of knowledge of cadres before and after receiving the training materials ($p < 0.05$). The results showed that cadre training effectively increased UKGMD cadres' knowledge about oral health and simple dental examination methods.

Keywords: cadres, UKGMD, dental and oral health, knowledge.

INTRODUCTION

In the community, dental and oral health issues still require attention. This is demonstrated by the fact that 57.6% of Indonesians still have a relatively high incidence of dental and oral health issues (Kemenkes, 2018). Only about 10.2% of the population receives dental care, even though 57.6% of people have dental and oral health issues. The current dental disease habit of Indonesians, particularly rural Indonesians, is still cumulatively aggressive, which means that tooth disease that has already damaged teeth cannot be cured because people initially ignored the pain it caused and only sought medical attention after their teeth had sustained significant damage very severe (Anindit et al., 2018).

The quality of public health is hoped to be enhanced, and tooth decay can be avoided, by someone who has knowledge, motivation, and is a facilitator (Maharani, 2017). The Rural—Community Dental Health Effort (UKGMD) is a ground-breaking initiative or strategy to assist the community in accessing dental health services that

are not being implemented due to time and financial constraints, to meet community needs and problems, bringing closer access to quality health services, and encouraging people to complete dental health care at the closest health service (Dewi et al., 2019). In particular, for recording, simple examinations, reporting the status of teeth and mouth, and referring patients to healthcare facilities, UKGMD dental health cadres will act as an extension of dental nurses (Ministry of Health, 2012). With the goal of modifying behavior about maintaining dental and oral health, UKGMD cadre training was conducted to educate cadres on maintaining dental and oral health by utilizing discourse, demonstration, and simulation approaches (Eluama et al., 2022).

The Community or The people of Karangtengah Village in the Baturraden District continue to express dissatisfaction with their dental and oral health. With a high caries index, Karangtengah Village is a village supported by the Faculty of Medicine, UNSOED. According to data from a dental and oral health survey conducted in 2019 among the

community of Karangtengah Village in the Baturraden District, the average level of caries with the Decay, Missing, Filling- Teeth (DMF-T) index was 13,12, which in the World Health Organization (WHO) categorized as very high (Prihastuti, 2021). Based on findings from observations made during Posyandu activities, dental health cadres have not been as effective as they could have been in educating people about dental and oral health, hearing complaints about dental and oral problems from the villagers, and still struggling to use basic dental inspection tools.

The training for UKGMD cadres will be carried out directly in Karangtengah Village as a result of the research done by Prihastuti (2021) on health cadres conducted online during the pandemic COVID-19. This training will teach cadres about dental and oral health, as well as how to examine and sterilize basic inspection tools directly to cadres so that it is different from previous research. Cadre knowledge is a benchmark during training because the learning process that involves the active participation of participants will obtain results in the form of

knowledge as a basis for better and long-lasting behavior change in the future (Nubatonis and Ayatulah, 2019). This research aimed to determine the effectiveness of dental health cadres training on changes in knowledge of village community dental health cadres (UKGMD) in Karangtengah Village, Baturraden District.

METHOD

This research uses a type of pre-experimental research. The research design is one group pre and post-test design, because one group of subjects and measurements are taken before and after giving treatment. The research was located at the hall of Karangtengah village, Baturraden, Banyumas Regency on 22nd July 2023.

The population of the research was all health cadres in Karangtengah Village, there are 30 cadres. The sampling technique used is total sampling, namely determining the sample by taking all respondents who came on that day at a place appropriate to the research (Notoatmodjo, 2010). 28 cadres came to the training and were used

as respondents, based on the inclusion criteria in the form of active cadres in Karangtengah village and respondents were able to take part in the research from start to finish the training.

UKGMD cadre training was carried out once during the research. The Dentist at Baturraden Community Health Centre will present information using PowerPoint, and this activity will also involve counseling and demonstrations, audiovisual media education, as well as practising using diagnostic tools, and filling out referral forms. Apart from that, cadres received a dental and oral health module to help cadres obtain simple diagnoses, dental models for media education, diagnostic tools for dental inspection patients, sterilization equipment such as alcohol and sterile cotton, and patient referral forms. The purpose of this training is for cadres to be able to conduct a quick screening and complete a referral form for dental and oral health complaints form of villagers, so that, in the event of a complaint, the local dental

health professional can immediately handle it.

A pretest and posttest as evaluation tools were used to measure changes in the level of cadres' dental and oral health knowledge before and after training. Questions about dental health, basic anatomy, dental and mouth diseases, how to prevent dental issues, and examination equipment can be found on the pretest and posttest. The data was analyzed statistically using SPSS (Statistical Package for Social Science) software. Starting by carrying out a normality test using the Shapiro-Wilk Test, because the number of samples is < 50. The data distribution test is normal so the bivariate data analysis test was carried out using a paired parametric T-test with a confidence level of 95%,

RESULTS AND DISCUSSION

Through a pre-test at the beginning of the activity and a post-test at the end of the session, the effectiveness of cadres training in this research was evaluated. The correct implementation of dental and oral health promotion and prevention

programs by dental health professionals at UKGMD based on standard operating procedures can prevent dental and oral diseases. The Rural Community Dental Health Effort (UKGMD), which is conducted at the Integrated Health Service Post (POSYANDU), Village Health Service Post (POSKESDES), Primary Health Centre (PUSKESMAS) and ‘Desa Siaga’ program, aims to improve community

engagement and capability in sustaining dental health (Mardelita and Sisca, 2020). To make it simpler for rural communities to obtain health services and for health services to assess patient concerns, training for cadres is very important. The following is data on the characteristics of UKGMD cadres in Karangtengah Village, Baturraden District.

Table 1. Characteristics of UKGMD cadres

No	Characteristics	Frequency
1	Gender, n (%)	
	Male	0 (0)
	Female	28 (100)
2	Aged, n (%)	
	30 – 39 y.o.	13 (46)
	40 – 49 y.o.	10 (36)
	50 – 59 y.o.	4 (14)
	≥ 60 y.o.	1 (4)
3	Level of education, n (%)	
	SD/MI	6 (21)
	SMP/MTs	14 (50)
	SMA/MA	8 (29)
4	Cadres period, n (%)	
	1 – 2 years	15 (53)
	3 – 4 years	10 (36)
	≥ 5 years	3 (11)

Source: Primary data, 2023

Based on Table 1, the cadres’ training was attended by a

total of 28 female cadres. For the age range, mostly about 30-39 years (46% cadres), the most education level was

junior high school (50% cadres), and the length of time as a cadres was mostly about 1-2 years (53% cadres).



Figure 1. Present training by the dentist



Figure 2. The direct practice of using diagnostic sets by cadres

These methods of educational delivery are designed to make it simpler for cadres to understand the topic presented and be able to carry out the assignments and counseling that are given. The use of visual media, according to Rusman (2017), can improve comprehension and memory. They also use audiovisual tools quite effectively to paint a clear picture. Display concrete, easily understood visuals that are

discussed through vibrant, energetic imagery (Liana et al., 2022). Using audiovisual aids makes it simpler to describe what has been spoken and explained. The addition of demonstrations and hands-on practice in this exercise allows cadres to see, feel, and comprehend how to use a diagnostic set, basic sterilization techniques, and complete a referral form to the primary health centre.

56 **Riski Amalia Hidayah**, The Effectiveness Of Dental Health Cadre Training On Increasing The Knowledge Of Rural Community Dental Health Effort (Ukgmd) In Karangtengah Village, Baturraden District

Changes in knowledge regarding dental and oral health before delivering material and practice con

afterward, which is derived from pretest and posttest evaluation are viewed as indicators of



Figure 3. Completing the pretest and posttest by cadres

The results of changes in cadre knowledge levels are contained in Table 2 below:

Table 2. Average \pm SD Pretest and Posttest Knowledge Scores for UKGMD Cadres Karangtengah Village

No	Analisis	Mean	SD	Min	Max	P-value
1	Pretest	7,92	1,57	5	10	0,00*
2	Posttest	8,85	0,57	8	10	

Note: * = significantly different ($p < 0,05$) by *paired t-test*

Table 2 shows that the mean and standard deviation of knowledge for UKGMD cadres before and after training were increased. The paired t-test statistical analysis shows a significance value of $p < 0.05$, indicating a statistically significant difference between the level of cadre knowledge before and following the cadre training material. The difference in the level of knowledge held by UKGMD cadres in Karangtengah Village before and after receiving training demonstrates the positive effects of cadre training,

specifically its efficacy in raising cadres' knowledge of dental and oral health as well as basic dental and oral examination techniques.

This research is following that conducted by Sadimin *et al.*, (2020) who studied 38 posyandu cadres in the Sambu Community Health Center area, Boyolali Regency, and had never received counseling and training regarding UKGMD. The research results show that the level of cadre knowledge is good (73.7%) and a significant value of 0.000 means that cadre training is effective

in increasing cadres' understanding of UKGMD in posyandu activities. The content and tasks that must be completed by UKGMD cadres who are in charge of implementing dental and oral health programs in villages must be better understood or mastered. These findings support Dewi et al.'s (2019) outreach program on dental and oral health, which included training on basic dental and oral examinations (caries examination). The researcher also shows that posyandu cadres are aware of the significance of the presented information for carrying out independent examinations. A considerable difference between the cadres' comprehension of UKGMD before and after cadre training, according to research by Sadimin et al. (2020), indicates that cadre training is beneficial in boosting cadre understanding of UKGMD in posyandu activities.

Within a set time frame, cadres are supposed to develop into organized people, and throughout that time, their quality is continuously increased to reach a goal, namely enhancing the village's dental and oral health. The existence of an outreach and coaching program

for cadres can help efforts to improve the standard of dental and oral health by allowing them to share and transmit the knowledge and skills acquired to friends, family, and the local community (Harapan et al., 2020). To promote knowledge, attitudes, and behavior changes through a strategy of community empowerment, learning experiences, information, and education must be made available to each individual (Sudimin et al., 2020).

There is an obstacle encountered when assisting cadres, are that cadres are still not familiar with the form and function of the diagnostic set so they need to pay attention one by one to how to use it, how to use the tool in the oral cavity, and how to hold the tool during training so that cadres know the use of the tool. Continuing to fill in the referral form, some cadres were still confused about mentioning complaints that were not on the referral form in other sections such as calculus/tartar, so the companion explained again how to write the diagnosis of oral disease.

Because one of the key responsibilities of cadres is to be change agents and impart new habits,

particularly in preserving dental and oral health in the community, it is crucial for Posyandu cadres to possess a high level of dental and oral health knowledge (Wirata et al., 2019). The knowledge and abilities of posyandu cadres can be significantly increased by providing training and mentoring. Additionally, evaluations can be conducted regularly every four months by examining which cadres actively participate in carrying out community inspections to facilitate knowledge transfer and ensure that all cadres can implement the information received.

CONCLUSION

The team observed that the socialization regarding dental and oral health using interactive materials and practice that was provided to UKGMD cadres in Karangtengah Village, Baturraden, produced effective results in increasing the cadres' knowledge of dental and oral health. Measurement of the attitudes and behavior of UKGMD cadres while carrying out their duties after training can be observed at another time.

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