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Empowerment of Dasawisma and Health Cadres as Family Cadres to Optimize Family Posyandu

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ABSTRACT
Background: Health cadres are one of the important elements in realizing health in society. In the North Lombok region, the change in the status of ordinary Posyandu to family Posyandu makes health care in the community more comprehensive for all family members. For this reason, efforts to increase the capacity of health cadres are important to improve health status in the family sphere. **Objective:** This study aims to see the effect of training on increasing the capacity of family cadres on the knowledge of family cadres in the North Lombok Regency area. **Method:** The sampling process is carried out using the cluster sampling method where each village representative in the Kayangan sub-district of North Lombok Regency sends a cadre representative to train to increase the capacity of Dasawisma cadres to become family cadres. A descriptive analysis of respondents' characteristics and differences in knowledge scores before and after family cadre training activities were conducted. The data analysis process was carried out with the Wilcoxon Test because the data distribution was abnormal. **Result:** Thirty-three health cadres meet the inclusion and exclusion criteria. The results showed that the median value (maximum-minimum) of family cadres before training, shortly after training and six months after training was 66.67 (36.67-80), 66.67 (53.33-83.33) and 70 (53.33-96.67). From the Wilcoxon test, there was a statistically significant difference between the knowledge score before training and six months after training ($p<0.05$). There was no statistically significant difference between the knowledge score before training and shortly after training, as well as the knowledge score shortly after training and 6 months after training ($p>0.05$). **Conclusion:** Family cadre empowerment training can improve knowledge scores 6 months after training, but there is no significant difference in knowledge score improvement shortly after training as well as between knowledge scores shortly after training and 6 months after training.

Keywords: *Empowerment; family cadre; family posyandu; training*

BACKGROUND

The Healthy Indonesia Program is one of the Nawa Cita programs, namely, Improving the Quality of Life of Indonesian People. Indonesia Government announces this program to improve the health and nutritional status of the community through health and community empowerment efforts. This program also supported financial protection and equitable distribution of health services for all Indonesian people. Efforts to achieve the goals of the Healthy Indonesia Program are carried out using the smallest unit of the community, namely the family. Because the family is the smallest unit of society, the health of the family or household determines the degree of public health[1].

The family approach is an effective effort to improve health status. Studies by Chan et al. show that family-based interventions have better outcomes for reducing childhood obesity than individualized interventions[2]. A randomized controlled trial study held in the United Kingdom showed something similar, that family approach-based intervention programs improved health, physical activity, and self-confidence[3].

Indonesia government also announced Family Approach based health program in 2016 consisting of 4 priority programs, namely: 1) Reducing maternal mortality; 2) Reducing infant mortality and stunting prevalence; 3) Controlling infectious diseases, especially HIV (HIDS, tuberculosis and malaria); 4) Controlling non-communicable diseases, especially hypertension, diabetes mellitus, obesity, cancer and mental disorders. This program is also called *Program Indonesia Sehat dengan Pendekatan Keluarga (PISPK)*[1].

In West Nusa Tenggara Province to implement PISPK, the Government announced Governor Regulation Number 30/Year 2021 concerning Revitalization of Integrated

Service Posts through Family Posyandu. Family Posyandu integrates posyandu for toddlers, posbindu remaja, posbindu PTM, and posyandu for the elderly. This Family Posyandu activity has been running since 2017, including in North Lombok regency[4].

However, from a preliminary study on the status of healthy families in North Lombok held in July – October 2021, it was found that the implementation of family posyandu was still ineffective. Many people are still in pre-healthy families. Some chronic diseases, such as tuberculosis and hypertension, have not been handled properly. In addition, there were also several other challenges in the form of low participation rates due to improper time and limited socialization of Family Posyandu activity, lack of facilities and infrastructure, as well as human resources[5].

Therefore, other efforts are needed to optimize the family posyandu activity. Health cadres are volunteers from the village community and are the front line in helping to overcome community health problems in the village. There are various types of health cadres, including toddler posyandu cadres, elderly posyandu cadres, nutrition problem cadres, maternal and child health cadres, and family planning cadres[6]. However, from the various cadres, no cadre integrates various health issues with a family approach.

This study is a pilot study to develop family cadres from dasawisma and health cadres to optimize family posyandu in North Lombok Regency. Dasawisma cadres are responsible for 10-20 families/houses to improve family welfare[7]. Meanwhile, health cadres are cadres who have duties in the health sector in communities such as posyandu for the elderly, toddlers, and so on. Dasawisma cadres and health cadres will be upgraded to family cadres, which play a role in integrating family health data and assisting families to improve their health status through collaboration with various stakeholders such as puskesmas workers, posyandu cadres, village governments, health offices, and non-governmental organizations.

Efforts to increase the capacity of family cadres can be made in various ways. One of them is through providing training to family cadres. Health training and education to increase knowledge can be done in multiple ways, including direct counselling and distributing pamphlets or posters. Increasing knowledge is expected to improve the attitudes and behaviours of family cadres to foster the health of the families they foster. This study aims to see the effect of training on increasing the capacity of family cadres on the knowledge of family cadres in the North Lombok Regency area.

RESEARCH METHOD

This research was conducted with a *quasi-experimental one-group pretest and post-test design*. The selection of respondents was carried out based on the *cluster sampling method*. The study was conducted in May-November 2022. This research began with the implementation of a pretest followed by an intervention in the form of health education training activities about family cadres by experts in the field of family medicine. After holding health education activities about family cadres continued with post-tests immediately after health education training and six months later. The inclusion criteria in this study are health cadres in the Kayangan district area, North Lombok Regency. The exclusion criterion is not to follow the research to the end. Thirty-three respondents who met the inclusion and exclusion criteria were included in this research study.

RESULT

Research to see the relationship between training activities for empowering family cadres and knowledge of family cadres will be held on May 28-29, 2022. The training activities are about family posyandu, assessment of family function status, the role of cadres in family education for communicable and non-communicable diseases, and cross-sectoral collaboration. The distribution of data on *pretest* and *post-test* scores was abnormal from the results of the Shapiro-Wilk test ($p<0.05$). Because the data distribution was abnormal, a Wilcoxon test was carried out to see the difference in cadre pretest and post-test scores.

The cadre participants who participated in the training activities were mostly cadres with a long service period (>1 year). And mostly followed by cadres with a relatively middle age group (31-40 years old)

The characteristics of respondents participating in the study are displayed in Table 1.

Table 1. The characteristics of the respondents

No	Characteristic	N	%
1	Age (year)		
	20-30	14	42,4
	31-40	15	45,5
	>40	4	12,1
2	Long time as a cadre (years)		
	<1	14	42,4
	1-5	12	36,4
	>5	7	21,2

The results of the study showed a statistically significant difference between the *pretest* and second *post-test scores*. In contrast, in the second post-test, the median value of cadre knowledge score increased to 70 ($p<0.05$). There is no statistically significant difference between the pretest and first post-test scores or between the first post-test scores and the second post-test scores. The cadre's knowledge scores before and after training can be seen in Table 2.

Table 2. The cadre's knowledge scores before and after training

No		Median score (min-max)	Pvalue (pre-post)	Pvalue (pre-post2)	Pvalue (post-post2)
1	Pretest	66,67 (36,67-80)	0,962	0,017	0,070
2	Post-test	66,67 (53,33-83,33)			
3	Posttest 2	70 (53,33-96,67)			

DISCUSSION

Family cadres training program is an example of implementing efforts to solve family health problems based on community empowerment. The current health cadres need to get quality training activities so that their professionalism of health cadres increases, and the health efforts carried out by these health cadres are integrated with health efforts that become government programs[8].

This activity of increasing the capacity of health cadres through family cadre training is a training activity that is integrated with health programs from the government, especially in the assessment of Healthy Family Indicators. The training activities carried out to family cadres aim to increase the capacity of family cadres in making follow-up plans with families to solve health problems in the family ranging from children to the elderly. These existing family cadres cultivate families around where they live. This activity is almost the same as the empowerment activities of health cadres carried out in Ethiopia through the Women Development Army Program, where health cadres have frequent contact with their neighbours, carry out health promotion related to healthy lifestyles in the household environment, identify pregnant women and connect households with existing health facilities if needed[9].

The training activities carried out in this study consist of several stages that follow five community empowerment cycles, namely: Ask (ask), Advise (suggest), Asses (asses), Assist (help), and Arrange (facilitate)[10]. Before the family cadres visit the family in the community, the family cadres receive training from the family medicine and the other team of the Faculty of Medicine, Public Health and Nursing Universitas Gajah Mada. The training materials provided to these family cadres are the same as the guidelines announced by WHO in 2018. The training obtained by family cadres is about how to make promotional and preventive efforts to prevent health problems in the family[11]. Furthermore, training was carried out to identify family health status using a pre-existing healthy family indicator questionnaire. After that, family cadres assess the risk factors for health problems that may arise in the family and advocate to health facilities and village governments regarding efforts to solve health problems in the family. Health cadres also received material related to connecting feelings to the target family, communicating, and maintaining the confidentiality of the family data they are in contact with[12].

After the implementation of the last post-test, the research team also evaluated activities with cadres and the North Lombok Regency government, also with the Sheep Indonesia Foundation, regarding what had gone well and was not optimal in training activities. The research team also asked for feedback from the cadres and stakeholders regarding what training activities will occur next. This is following research conducted by Dahn, 2015 where activity evaluation is an essential point in cadre empowerment activities[13].

A previous study conducted by Baviskhar 2021 in India stated that training activities provided to health cadres related to TB management in the community can significantly increase the knowledge score of these cadres in community TB handlers at six months after training[14]. These results are following the results of this study, where there was a significant increase in knowledge scores between the pretest score and the knowledge score 6 months after training, but there was no significant increase in knowledge scores between the pretest and shortly after the training.

This research is the first research conducted in Indonesia to see the increase in family cadre knowledge using the 5A framework for community empowerment. Training materials are provided by people who are experts in the field of community empowerment and Family Medicine specialists. Training uses online media so that the material can be displayed in written form and audiovisual form. The material displayed in audiovisual form is expected to be more interesting and easier to remember by family cadres who are ordinary people[15].

Some limitations exist in this research activity. Training activities are provided online, making physical interaction between the trainers and the trainees limited. It is hoped that offline cadre empowerment training activities can be carried out in the next research. It can make a beneficial impact, making the physical interaction between the trainers and trainees more aware. In the following study, we hope that further research can also look at changes in attitudes and behaviours of cadres related to family empowerment after empowerment training so that the impact measured related to this training activity becomes wider.

CONCLUSION

Family cadre empowerment training can improve knowledge scores six months after training compared with knowledge score before training. There is no significant difference in knowledge score improvement shortly after training compared with knowledge score before training and knowledge scores shortly after training compared with 6 months after training.

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Ethical Approval and Informed Consent

Research activities were conducted to see differences in knowledge scores before and after the family cadre training program. No specific medical interventions were given to respondents in this study. Participants willing to participate in this research sign the informed consent form before the research is done. This research received ethical clearance from the Ethics Committee of the Faculty of Medicine, Public Health and Nursing Universitas Gajah Mada with the number KE / FK / 0431 / EC / 2022.

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