TRAINING INTERVENTION PROGRAM FOR CADRES INCREASING KNOWLEDGE AND SKILLS ABOUT FOOT CARE OF DIABETES MELLITUS PATIENTS

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Abstract

The prevalence of diabetic foot as a complication of diabetes mellitus is increasing. This requires an alternative approach to overcome obstacles in health services for patients with diabetes mellitus, one of which is through cadres as partners in health services. However, the role of cadres has not been much focused on the area of non-communicable diseases in the community. So there needs to be an intervention strategy to increase the empowerment of cadres. This study aims to develop a cadre intervention program training on the knowledge and skills of cadres in foot care for diabetes mellitus patients. This study used a pre posttest one group design on 24 cadres in the working area of the Lempake Health Center. The variables measured included the knowledge and skills of cadres regarding foot care for diabetes mellitus patients using questionnaires and observation sheets. The results of the analysis with Wilcoxon showed that there was a difference in about the knowledge and skills of cadres regarding foot care for patients with diabetes mellitus (p value <0.05). Therefore, it is necessary to develop and refresh cadres related to the prevention of complications of non-communicable diseases and can be used as a program in the Primary Health Care.

Keywords: *Cadre intervention program training, knowledge, skills*

INTRODUCTION

Diabetic foot is one of the complications of diabetes mellitus which is increasing in cases. The prevalence of diabetic foot ulcers in Indonesia reaches 12%, this result is higher than China and the prevalence globally[1]. If diabetic foot ulcers have occurred, the cost of treatment is 5,4 times higher in the first year and 2,8 times in the second year compared to patients with diabetes mellitus without foot ulcers[2]. Research by Purwanti et al (2016) explains that one of the causes of diabetic feet is due to non-routine foot care (OR 12,936)[3]. This is in line with the research of Tini et al (2019) that foot care is associated with the risk of diabetic feet (p value 0.04)[4].

There are several factors that are still an obstacle in efforts to prevent diabetic foot in developing countries. Sohal et al (2014) revealed a mismatch of communication and language between health workers and patients which resulted in patients having difficulty understanding diabetes education[5]. Another factor is the difficulty of health care providers in carrying out foot screening due to limited resources and increasing their work[6].

Therefore, it is necessary to have an alternative approach that aims to overcome obstacles in health services for patients with diabetes mellitus in order to prevent complications. One of the partners and liaisons between primary health services and the

community is cadres. Cadres are community members who are trusted to be public health officers on the front line who are able to make a positive contribution to the surrounding community. However, currently the role of cadres has not been much focused on the area of non-communicable diseases in the community. So there needs to be an intervention strategy to increase the empowerment of cadres.

This study aims to develop a cadre intervention program training on the knowledge and skills of cadres in foot care for diabetes mellitus patients in the working area of the Lempake Public Health Center, Samarinda City.

MATERIAL AND METHODS

This research has two stages of design, where the first stage is the development of the cadre intervention program. This stage includes the preparation of cadre intervention program tools such as learning modules, manuals and cadre workbooks. Furthermore, cadre training and pilot study of cadre intervention programs were carried out as a form of initial testing of tools and interventions. The cadre training was carried out for 2 sessions regarding the material for coaching cadres to become instructors and motivators, material on diabetes mellitus and self-care as well as material on diabetic feet and foot care.

The study was conducted on 24 cadres in the working area of the Lempake Health Center, Samarinda City with a one group pre and post test design. The variables measured included the knowledge and skills of cadres regarding foot care for diabetes mellitus patients using questionnaire instruments and observation sheets. The analysis in this study includes univariate and bivariate analysis. Univariate analysis using frequency distribution and percentage of characteristic data. knowledge and skills of cadre respondents. Meanwhile, the bivariate analysis used a paired comparative test with 2 repetitions and 3 categories through Wilcoxon.

RESULTS

This study involved 24 cadres in the working area of the Lempake Health Center, Samarinda City. The results showed that all cadre respondents were women with an average age of 44,5 years and almost all of them were married (95,8%). Most of the cadre respondents work as housewives (75%) with advanced education level (66,6%) and are Javanese (50%).

Table 1. Distribution of Characteristics of Cadre Respondents in the Working Area of Lempake Health Center, Samarinda City in 2021

Characteristics	Frequency	Percentage
Age	Mean (SD) 44.5 (8.64) Min-Max 28-60	
Gender		
Man	0	0
Woman	24	100
Religion		
Islam	24	100
Work		
Civil servant	1	4,2
Private employees	2	8,3
Entrepreneur	2	8,3
Teacher	1	4,2
Housewife	18	75
Education		
Basic education	4	16,7
Further Education	16	66,6
Higher education	4	16,7
Ethnic group		
Banjar	10	41,6
Java	12	50
Bugis	1	4,2
Kutai	1	4,2
Marital status		
Marry	23	95,8
Widow	1	4,2

Table 2. Comparative Analysis of Respondent Knowledge of Pre and Post Cadre Intervention Program (PIK) Training in the Working Area of Lempake Health Center, Samarinda City in 2021

Knowledge	Pre (%)	Posts (%)	*p value*
Well	4 (16,7)	24 (100)	
Pretty good	20 (83,3)	0	0,001
Not good	0	0	

Table 2. shows that before the cadre intervention program (PIK) training was carried out, almost all cadre respondents had quite good knowledge (83,3%) about foot care for diabetes mellitus patients and after the training, all of them had good knowledge (100%). The results of the Wilcoxon test found a P value of 0.00 (p value <0,05), which means that there is a difference in knowledge about foot care in patients with diabetes mellitus before and after training in the cadre intervention program (PIK).

Table 3. Comparative Analysis of the Skills of Respondents for Pre and Post Cadre Intervention Programs (PIK) in the Working Area of Lempake Health Center, Samarinda City in 2021

Skills	Pre (%)	Posts (%)	*p value*
Capable	4 (16,7)	14 (58,3)	
Capable enough	20 (83,3)	10 (41,7)	0,008
Less fortunate	0	0	

Table 3. shows that before the cadre intervention program (PIK) training was conducted, almost all cadre respondents had quite capable skills (83.3%) in performing foot care for diabetes mellitus patients and after training they were categorized as capable (58.3%). The results of the Wilcoxon test found a P value of 0.008 (p value <0.05), which means that there is a difference in the skills of cadres regarding foot care for diabetes mellitus patients before and after training in the cadre intervention program (PIK).

DISCUSSION

The results showed that there were differences in the knowledge and skills of cadres regarding foot care for diabetes mellitus patients between before and after being given training in the cadre intervention program (PIK) with $p < 0.00$. The knowledge and skills of the cadres before the training was pretty good (83,3%). This is based on the average age of cadre respondents 44,5 years which is a productive age in seeking information. In addition, most cadres have advanced education (6,.6%) and even higher education (16,7%). The level of education can determine a person's ability to understand the knowledge gained[7].

Referring to tables 2 and 3, there is a significant increase in cadre knowledge to be good (100%) after being given training in the cadre intervention program (PIK). Meanwhile, most of the skills of cadres are in the capable category (58,3%). Notoatmodjo (2010) reveals several factors that influence the success of a training, including training materials, training environment, tools and media used and conditions of learning subjects[7].

The cadre intervention program (PIK) training provided included material on diabetes mellitus and self-care, as well as diabetic foot and foot care. Diabetes mellitus is a disease that often occurs in the community so that it makes respondents interested in the material provided. In addition, the method in providing material also uses a demonstration method regarding foot care and role play among fellow cadres. This stimulated cadre respondents to more easily understand the information provided.

The training was also carried out in the hall of Lempake Health Center, Samarinda City, which was quite representative. The room is equipped with television media that displays the material visually and is large enough to accommodate the training participants. The physical environment is well known by the respondents, because it is also often used as a

meeting place for cadres in the working area of the Lempake Health Center. The meeting room is on the 2nd floor which is separate from patient services at the Puskesmas, so it does not cause noise in the room. In addition, the room is also facilitated with air conditioning which provides coolness and comfort for the trainees.

The training tools used are modules and workbooks for cadres in the cadre intervention program (PIK). The training module contains activities and learning objectives as well as the material provided. It is made in an attractive form and contains pictures so that the trainees can easily understand the material provided.Schnotz (2005) states that text and images that enter through auditory and visual will be integrated into new knowledge that will be stored longer in long-term memory[8]. Meanwhile, the physiological condition of cadres is also an important factor in the success of activities[9]. All cadres do not have hearing or vision problems so they can listen to the training materials well.

Assessment of cadre skills using an observation sheet in the form of a check list of each foot care procedure. The instrument uses the Gutman scale in the form of done and not done. The results showed that there were still cadres who had sufficient skills in performing foot care for patients with diabetes mellitus (41,7%). In short, the training time and the lack of repetition of skills training can be a less than optimal contribution to improving the skills of cadres.

CONCLUSION

Cadre Intervention Program (PIK) training is an activity organized for cadres in the working area of the Lempake Health Center, Samarinda City. The results showed that training activities could increase the knowledge and skills of cadres regarding foot care for patients with diabetes mellitus (p value 0,00). The knowledge and skills of cadres regarding foot care in diabetes mellitus patients were quite good before the training and could increase in the good category after the cadre intervention program (PIK) training was carried out. The training materials and methods as well as the training tools and media used can be factors that contribute to the acceptance of the training results.

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