

Empowerment of Diabetes Self-Management Assistance Groups (DAG) as an Effort to Improve Self Care Behavior of Diabetes Mellitus Patients in Gorontalo City

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ABSTRACT

Self-care management is the key to the success of diabetes mellitus treatment. Self-care of glucose management, diet control, a healthy lifestyle will determine quality of life of people with Diabetes Mellitus, but it can't be achieved without support from patients environment, included family. .Therefore, this community service activity is expected to be able to increase the knowledge, skills, and abilities of families in carrying out independent care for family members who suffer from Diabetes Mellitus, improve self care behavior in Diabetes Mellitus Patients so that the health status of people with Diabetes Mellitus in the Gorontalo City can be increased. In addition to involving the family, health cadres as part of the community also play a role in efforts to improve the health quality of Diabetes Mellitus Patients by increasing their understanding and skills in treating Diabetes Mellitus Patients. This Community Service begins with the formation of Diabetes Assistance Group (DAG) , improving the basic competencies of health cadres and families through structured education and training, followed by monitoring and evaluation of the DAG programme. The results obtained showed an increase in the posttest knowledge average in 10 health cadres who had been given education and a decrease in blood glucose levels in 30 diabetes patient who became the fostered family with an average decrease of 111 mg/dL.

Keywords: diabetes, assistance group, self-care

INTRODUCTION

Patients with Diabetes Mellitus in Indonesia are increasing every year. Indonesia ranks 6th out of ten countries with the highest number of diabetes patients, namely 10.3 million patients per year 2017 and is expected to increase to 16.7 million patients per year 2045 (Puspitasari, 2020). Gorontalo ranks 7th in the number of people with Diabetes Mellitus from 35 provinces in Indonesia with a prevalence that increased from 1.3% in 2013 to 2.4% in 2018 (Risksedas, 2018).

The main goal of diabetes mellitus treatment is to prevent and minimize acute and chronic complications. The goal of Diabetes Mellitus treatment will be successful if diabetes management is carried out based on the patient's ability to initiate and take action independently through self care activities or known as self care management. The ability of Diabetes Mellitus patients to carry out appropriate and successful self-care habits is closely related to morbidity and mortality rates and significantly affects productivity and quality of life (Rantung, Yetti, & Herawati, 2015).

Self-care activities as nursing interventions are the key to the success of diabetes mellitus management. Self care management includes the ability of DM patients to perform self-care on four components which include diet regulation, activity regulation, blood sugar monitoring and stress management. One of the factors that influence self-care is family support. The better the family support provided, the better self-care for DM patients, so that they can improve behavior and healthy lifestyles. Shofiyah & Kusuma's (2014) research shows that DM patients with good family support also have good self-care. Research from Mayberry & Osborn (2012) revealed that families who do not provide support to DM patients will have an impact on decreasing patients' self-care.

One of the government's efforts to improve the quality of public health is to involve the community in health promotion programme. Health cadres as part of the community become one part of the community health programme. The existence of this Community Service Activity

is expected to be able to empower health cadres who will later provide guidance to the families of patients suffering from Diabetes Mellitus so that self-care efforts for Diabetes Mellitus patients can be more optimal and it is hoped that blood sugar levels, diet and patient's daily activity patterns can be more controlled. Based on the background of the problem above, it is considered necessary to carry out community service by involving the Community-Based Diabetes Self Management Assistance Group (DAG). The objectives achieved from this activities are increased understanding of health cadres and community regarding about self care management of Diabetes Mellitus Patients and increased ability of families in caring for families suffering from Diabetes Mellitus.

METHOD

The community services held in 3 stages. The first stage was socialization and establishment of DAG Group, this stage was carried out to provide an understanding of the Community Service program and the objectives of forming the DAG. The second stage was competency improvement stage through training and education to DAG member, in this stage, the member are given education about self care management in diabetes mellitus patients which includes diet management, exercise, blood sugar monitoring and stress management in Diabetes Mellitus patients. The third stage was assistance to members of DAG to provide education to the fostered families. In this activity, each DAG member gets 10 fostered families to be given assistance so that the total assisted families are 30 families. Families are given assistance regarding strategies in the management of diabetes mellitus and treatment methods. The tools used in the activity are leaflets, diabetes self management module, laptops, blood sugar test kit and blood sugar monitoring sheet. The population and sample in this activity diabetes mellitus patient who live in Gorontalo City. The place of implementation is in the working area of Kota Timur Community Health Center, in September 2021. Data collection is done by asking question through questionnaire, discussing, and monitoring blood sugar of the patient in the fostered family.

RESULTS

The community services was attended by 10 health cadres as DAG member. From the results of the evaluation of members of the group, it was found that there was an increase in the average posttest of cadres from the sufficient and less categories to the good category. This shows an increase in knowledge of health cadres related to self care management methods in patients with diabetes mellitus. Beside that, from the blood sugar monitoring sheet of fostered family with diabetes, it was found there was decreasing in blood glucose levels after assistance from DAG member.

DISCUSSION

From the results of monitoring blood sugar for 10 days in foster families with diabetes, it was found that the average decrease in blood glucose was 111 mg/dL with a comparison of the average blood sugar before education was 292 mg/dL and after education was 181 mg/dL. In addition, based on the results of interviews with diabetics, there were changes in lifestyle in terms of diet and regularity of taking medication.

The decrease in blood glucose in the target family shows that the education provided by the cadres is effective in motivating families and diabetes in making changes to self-care management so that the patient's blood glucose levels are controlled and decreased. This also proves that family support plays an important role in supporting diabetes patients to change their self-care behavior. Research conducted by Rosland et al., (2018) found that family support proved to be effective in helping diabetes mellitus patients in self-care management, especially in conducting diet management and monitoring blood glucose levels. Diabetes mellitus is a chronic disease that requires care and longterm treatment caused patients experience a decrease in motivation so that they need support from the surrounding environment. In addition, even though the patient has committed to self-care, whether on a diet, routine in treatment and

routine activities, but not getting good family support will cause the patient's self-care management to be difficult to implement, especially after discharged from hospital.

Research conducted by Wen, Parchman, & Shepherd (2015) found a significant relationship between the implementation of family functions and dietary compliance in patients with diabetes mellitus. One of the barriers or obstacles faced by patients in dieting is the lack of family support. Families need to be given education and counseling when having a family member with diabetes mellitus. Research conducted by Gupta et al., (2019) found that family and partner support can also help reduce stress, depression and medication non-adherence in diabetes mellitus patients.

Regular home visits from health cadres to patients is also very helpful for patients in monitoring blood glucose and diet management. Health cadres provide education about self care management and motivate patients to make regular visits and scheduled exercise programs at the puskesmas, so that the patient's blood sugar is easily controlled by health workers. Another community services done by Pratama al., (2022) found that involving health cadres in basic wound care training could prevent incidence of foot ulcer in diabetes patient. Research conducted by Ding et al., (2021) in China on found that the empowerment of health cadres in primary health services was proven in the management of chronic diseases in the community. The involvement of health cadres in providing education and motivation to patients is proven in increasing visits to community health center (Puskesmas) and improving compliance with taking regular medication.

CONCLUSIONS AND RECOMMENDATIONS

From the evaluation results on health cadres and assisted families, it can be concluded that the establishment of a Diabetes Self Management Assistance Group (DAG) can improve the knowledge and quality of life of diabetes mellitus patients in the community. From this activity, it is hoped that primary health service providers (Puskesmas) are able to ensure the continuity of the implementation of DAG in the community by empowering health workers and health cadres, so that the non-communicable disease control program mainly diabetes disease in the community can run well.

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APPENDIX



Figure 1. Diabetes Assistance Group Formation and Socialization



Figure 2. Diabetes Assistance Group Member Training



Figure 3. Assistance on Fostered Family