

Health Education, Screening and Diabetic Foot Exercise in Cimanggu District, Bogor

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Abstract

The emergence of the COVID-19 disease outbreak and the government's PPKM regulations have forced people to work remotely from their homes, making them less physically active and exercising so that they can be at risk of triggering the emergence of various diseases in the future, one of which is diabetes mellitus. So STIKes Muhammadiyah Ciamis Working in collaboration with Moist Care Clinic Bogor feels it is crucial and required to provide education about the risk of diabetes, screening for diabetic feet as early detection and diabetic foot exercise as a good physical activity for the feet to prevent diabetic sores. This community service project's goal is to provide health counseling, foot screening, and foot exercises for diabetes mellitus in the Cimanggu District community, Bogor. This community service is intended for the Cimanggu District Community in Bogor. The activities are carried out within a period of 1 month starting from January 6 to February 4, 2022, Preparation, execution, and evaluation is the stages of an activity. Preparation includes a field survey and activity permit. Doctors from the Moist Care Clinic practiced foot screening as part of the implementation. Health counseling by lecturers from STIKes Muhammadiyah Ciamis and diabetic foot exercises by DIII Nursing Study Program Students from STIKes Muhammadiyah Ciamis. Each stage of activity is evaluated by compiling and drawing conclusions from the data collected, with the Moist Care Clinic following up on these findings in the future. The results of the activity are the implementation of diabetes foot screening, diabetes health counseling, and diabetes foot exercises. Implementing activities are lecturers, nurses, and students and assisted by the Cimanggu sub-district community.

Keywords: diabetes mellitus, foot exercise, screening

INTRODUCTION

The COVID-19 virus pandemic has undeniably created unrest, millions of people have been infected in various parts of the world, hundreds of thousands of others have died, and hundreds of thousands of others have faced serious illnesses and long-term health impacts (Hidayati et al., 2021; Setiawan et al., 2021). This condition caused the government to take several policies, including the implementation of Community Activity Restrictions (PPKM). The government has officially established the implementation of PPKM since last year. PPKM was formed to prevent the rate of increase in the number of the corona virus or positive for Covid-19. Initially, PPKM started in Java and Bali. And along with the increase in the positive number of COVID-19, it will be implemented on a national scale (Nurhidayat et al., 2021).

Diabetes Mellitus (Diabetes mellitus) is a chronic disease with a high risk of complications (Ariyanto et al., 2021). This is caused by hyperglycemia due to decreased insulin production in the body and insulin resistance, causing complications in the form of other chronic non-communicable diseases that can lead to death (Setiawan et al., et al., 2021). Diabetes mellitus is a group of metabolic disorders characterized and defined by untreated hyperglycemia.

DM can cause acute and chronic complications if not treated properly (Setiawan et al., 2018). One consequence of chronic complications is that they can lead to microangiopathy and macroangiopathy, which are causes of chronic complications. In microangiopathy, there are several kinds of complications, including diabetic nephropathy which can cause kidney failure, blindness and burning and shaking feet, especially in the middle of the night, and neuropathic disorders if not treated properly, there will be a high risk of foot ulcers and amputations (Oktaviana, Nadrati, & Fitriani, 2022).

There are two kinds of management to prevent ulcers and amputations in the legs, including preventive and rehabilitative measures. Rehabilitation measures can be implemented through an integrated program: ulcer assessment, metabolic control, wound resection, bacterial culture, appropriate antibiotics, rehabilitation surgery, and medical rehabilitation. You can take preventive measures with foot care training, preventive health checks, and foot exercises (Ferreira et al., 2019).

Diabetic foot screening is the first step in identifying the risk of diabetic foot ulcers. DM patients with foot examinations have a lower risk of amputation when compared to DM patients without diabetic foot examinations. This method aims to scoping review or identify in detecting diabetic foot wounds. Based on previous research, it shows that diabetic patients who carry out diabetic foot screening activities will avoid complications of DM itself. In addition to screening, DM sufferers are recommended to carry out diabetic foot exercises (Alqarni et al., 2022; Firmansyah et al., 2021).

Leg gymnastics is one of the physical activities or exercises performed by diabetics using the technique of moving the legs to control blood sugar levels. Changes in blood glucose levels, namely the value of glucose in the blood measured before and after the leg exercise movement (Halajur, 2021). Foot exercise is performed on people with type 1 diabetes, type 2, and other types of diabetes and is highly recommended as an early preventive measure since the patient is first diagnosed with diabetes. Leg gymnastics is categorized as a light sport or activity, and can be done indoors or outdoors, especially at home using chairs and used newspapers, making it easy, fast and completed in about 20-30 which is useful to avoid injury feet and improve leg blood circulation (Yusnaeni & Fajriansih, 2021).

Based on the description above, we are interested in implementing this service activity which has the aim of preventing foot injuries in DM patients by conducting counseling, screening and diabetic foot exercises in the District, Tanah Sereal, Bogor city.

METHOD

The research method carried out in community service this time was health counseling activities regarding diabetes, screening and DM foot exercise activities. The target in this counseling is to residents of Tanah Sereal District, Bogor City in several locations. while the equipment used in this service are DM leaflets, monofilament test, forms for screening and tools for demonstration of leg exercises, namely chairs and newspapers.

This service is held several times in several locations for one month from January 6 - February 4 2022, starting from 09.00 to 11.30 every day. a series of activities carried out starting from the preparation of all components from positioning the audience to be in front of the extension worker, as well as preparing the equipment to be used. Furthermore, the instructor will explain material related to DM disease. After the presentation of the material, a diabetic foot screening was carried out using a monofilament test and filling out a form. The setting of the place is modified by using chairs to form a circle, the trainer takes a position so that it is visible to all audiences, so that when the audience does gymnastics, they do not experience difficulties. All participants were also given one sheet of old newspaper as a medium for foot exercise activities. The instructor in the middle gave an example of a foot exercise which was then followed by the participants.

At the data collection or screening stage, it is carried out using the observation method carried out on all participants. This community service activity is divided into three stages, namely the orientation stage, the work stage and the termination stage. The orientation phase begins with introducing all extension workers, conveying objectives, validating data, and asking the willingness and readiness of extension participants. The work stage is done by setting the position, initial briefing, presentation of material, and questions and answers, diabetic screening, exercise demonstration imitated by participants. And the third stage is termination which contains an evaluation of the course of activities from beginning to end. The evaluation is also divided into 2, there is a subjective evaluation which is done by asking the patient's feelings after being given counseling, and an objective evaluation by asking again the material given.

The following is a graphical representation of the entire set of extension activities depicted in the figure 1.

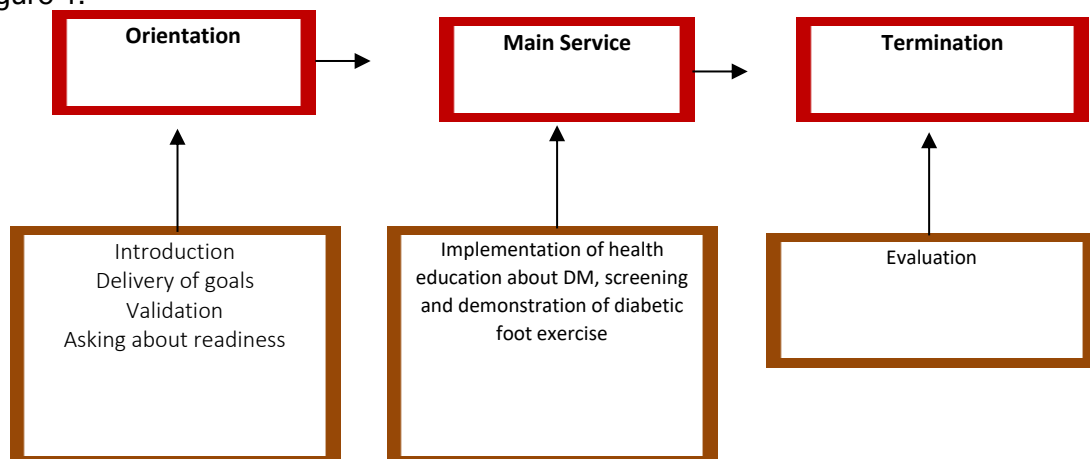


Figure 1. Extension diagram graphic

From the graphic above, it can be seen that these activities are carried out sequentially. Since the orientation stage, which is aimed at fostering a relationship of trust with the audience. Then the second stage of work is counseling, screening and DM foot exercise activities. And the last stage is the termination stage by conducting subjective and objective evaluations.



Figure 2. Health Counseling, Screening and Diabetic Foot Exercises in several locations

Figure 2 above is an activity when the instructor is delivering material to participants about DM disease. Participants seemed to listen and respond very well, and were also active in asking the extension workers. Also, take another picture of diabetic foot screening and exercise.

RESULTS

This service activity was carried out with stages starting from health education, screening and DM foot exercise activities were carried out in collaboration between STIKes Muhammadiyah

Ciamis Lecturers and Bogor Clinic Moist Care and STIKes Muhammadiyah Ciamis Students as mediators of the implementation. The results of this community service activity are:

- Participants know and can mention what things need to be avoided to prevent diabetes
- Participants can minimize the occurrence of diabetes complications with diet
- Participants can find out whether there is an incidence of diabetes that may appear in themselves through screening
- Participants can practice diabetes foot exercises well

According to Wayan Ardana, there are 4 main points in the management of diabetes mellitus, namely education or health education, medical nutrition therapy, physical activities such as foot exercises, and finally pharmacological therapy (Sakitri & Nurkalis, 2022). The focus of this service activity is health education about diabetes mellitus, foot screening by doctors and physical exercise in the form of diabetic foot exercises. Health education is carried out so that knowledge can increase in order to improve health status (Firmansyah et al., 2018; Setiawan et al., 2018) and prevent the occurrence of diabetes mellitus early, with this it is expected that compliance can really become a benchmark for diabetes prevention (Nasution & Siregar, 2020). While leg gymnastics is used as one type of activity that can be done by people with diabetes or not to increase blood circulation in the legs and prevent injury.

Education is very important to increase one's knowledge and plays an important role in doing what is important for one's health (Nurapandi et al., 2022; Safitri et al., 2022; Silvia et al., 2022). Because through education, human knowledge can expand the way of doing things. As future students and healthcare professionals, we can play a role in providing health education to minimize complications (Oktaviani et al., 2022; Rohimah, 2021). In addition, we also act as educators who can help our clients improve their knowledge of health, symptoms of illness, and even behavior related to changes in their behavior after health education.

Health education is one form of intervention in health promotion (Kusumawaty & Nurapandi, 2022; Octavia, Siahaan, & Saragih, 2022). Notoatmodjo (2012) also states that health promotion in the sense of education in general is any planned effort to influence other people, whether individuals, groups or communities, to do what is expected by the authors of health education or health promotion. One of the effective means of health education about DM with a group approach is the lecture and demonstration method (Setiawan et al., 2018).

The demonstration method is a show and/or demonstration. In that case, each target will try to do it himself so that the target has a stronger memory. Demonstrations can clarify the learning outcomes of each target when they carry out experimental activities. This type of learning process is in accordance with the modern theory of learning by doing. The main difference between the demonstration method and the lecture method is the implementation of learning activities. Demonstration showing the process. Although the lecture provides an opportunity for purpose through a question-answer session. However, the demonstration itself combined with the lecture can increase the effectiveness of the health teaching that is carried out.

CONCLUSIONS AND RECOMMENDATIONS

The results of service activities through a health education approach with lecture and demonstration methods seem to have a positive impact on participants' knowledge and attitudes towards diabetes. The affected community can find out and get more health information and knowledge about the importance of maintaining health and preventing diabetes complications from an early age.

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