

PHYSICAL ACTIVITIES OF DIABETES MELLITUS PATIENTS AT DELIA GENERAL HOSPITAL, COMPLETE DISTRICT, LANGKAT REGENCY

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Keywords

Self Care Activities; Diabetes Mellitus

ABSTRACT

Introduction

The prevalence of people with Diabetes Mellitus (DM) in the world from year to year continues to increase. The results of the data at the Delia General Hospital (RSU) in Langkat Regency in 2020 there were 115 DM patients. Self care activity has an important role in the management of DM in controlling Blood Glucose Levels (KGD) and preventing complications of DM. Self care activity includes several domains, namely food selection, physical activity, proper drug intake and blood glucose monitoring. Self care activity is strongly associated with improving glucose control in patients with chronic diseases such as DM. The purpose of this study was to identify self-care activities for DM patients at Delia General Hospital, Langkat Regency.

Method(s)

This study used a descriptive design with univariate analysis on 23 respondents who suffered from DM at RSU Delia. This study used a purposive sampling technique with a measuring instrument in the form of a SDSCA (Summary of Diabetes Self-Care Activities) questionnaire which had been tested for validity and reliability.

Result(s)

The results showed that the majority of DM patients were aged 45-59 years, the average last education was high school, female gender with a job as a housewife and the average compliance of DM sufferers in undergoing self-care activities is 74%.

Conclusion(s)

It is hoped that nursing practice will further increase awareness and ability of DM sufferers in carrying out self-care activities.

INTRODUCTION

Diabetes Mellitus (DM) is a very dangerous disease. because it can cause many complications. Complications due to Diabetes Mellitus significantly increase morbidity and mortality. This is due to damage to the body's organs, causing various diseases, such as blindness, kidney failure, nerve damage, heart disease, diabetic foot, and so on. (Sutanto, 2018). According to the American Diabetes Association (2018) DM is a group of metabolic

diseases that occur due to abnormalities in insulin secretion, insulin action or both. Diabetes Mellitus has become a common disease that can be found everywhere. The number of incidents continues to rise sharply and even tends to be worrying. Diabetes Mellitus can cause complications such as diseases of the eyes, heart, nerves, kidneys and can lead to amputation. DM disease consists of type 1 diabetes mellitus and type 2 diabetes mellitus. Type 2 diabetes mellitus is more common than type 1 diabetes mellitus. Type 2 diabetes mellitus is one of the main causes of

death or can be averaged around 2.1% of all deaths in the world. The number of people with type 2 DM is increasing in the adult age group between the ages of 30 years and over and in all socioeconomic statuses (Perkeni, 2019).

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Hospital data in the last year in 2020 there were 115 Diabetes Mellitus patients and the results of an initial survey conducted at Delia General Hospital were obtained from 10 patients with diabetes mellitus, 6 were not supported by their families and 4 others received support from their families. From these data, it turns out that there are still people with diabetes mellitus who are not supported by their families for their illness. Based on the description above, I am interested in conducting research on the relationship of family support regarding self care activity in patients with diabetes mellitus. From the above background, the purpose of this study was to find out " Self Care Activity in Diabetes Mellitus Patients at Delia General Hospital, Langkat Regency in 2021".

METHODS

The type of research used in this research is quantitative research with descriptive design using univariate analysis which aims to identify

the characteristics of respondents with DM and self-care activities of DM patients which include diet, physical exercise, foot care, taking medication and monitoring blood sugar.

The population in this study were all DM patients who visited the Delia General Hospital, Langkat Regency.

The sample in this study was DM patients who visited or were treated in May-August 2021 at the Delia General Hospital, Langkat Regency. The sampling technique was purposive sampling, which is a population-based sampling technique that complies with the inclusion criteria, namely DM patients who are willing to become respondents, can communicate well and with full awareness.

RESULTS

Table 1. Respondents Characteristics

Characteristics of Respondents	Frekuensi (n)	Percentage (%)
Age		
20-44 Years	8	35%
45-59 Years	10	43%
> 59 Years	5	22%
Education		
Primary school	2	9%
Junior high school	5	22%
Senior High School	12	52%
College	4	17%
Profession		
Self-employed	6	26%
Laborer	4	17%
Housewife	10	44%
Government employees	3	13%
Gender		
Man	10	43%
Woman	13	57%

From Table 1. It can be explained that the age of 45-59 years is the most dominant age suffering from Diabetes Mellitus around 43%, and has a high school education (High School) as much as 52%). The most dominant occupations of respondents in this study were housewives (44%) and female (57%).

Table 2. Components of Self Care Activity in Diabetes Mellitus Patients at RSU Delia Langkat Regency

Variabel	Diabetes Mellitus Patients	
	F	(%)
Dietary habit		
Well	21	91,30
Not enough	2	8,70
Physical training		
Well	16	69,56

Not enough	7	30,43
Foot Care		
Well	8	34,78
Not enough	15	65,22
Take medicine		
Well	20	86,96
Not enough	3	13,04
Blood Sugar Monitoring		
Well	20	86,96
Not enough	3	13,04

In table 2 it is found that the majority of respondents with a good diet are 21 people (91.30%), good physical exercise are 16 people (69.56%), foot care is not good as many as 15 people (65.22%), drinking 20 people (86.96%) good medicine and 20 people (86.96%).

Table 3. Frequency Distribution of Respondents based on Self Care Activity Compliance in DM patients at Delia General Hospital, Langkat Regency

Self Care Activity	Frekuensi (n)	Percentage (%)
Obeys	17	74%
Not obeys	6	26%

In table 3 it is found that the majority of respondents with a level of compliance as many as 17 people (74%) and non-compliance as many as 6 people (26%).

DISCUSSIONS

Characteristic Respondent

In this study, it was found that the most dominant age was between the ages of 45-49 years, where the results were the same as the research study conducted by John S. Kekenusa, et al (2018) which stated that age 45 years had 8 times the risk of suffering from DM compared to who do not have a family history of DM (Kekenusa, Ratag and Wuwungan, 2018) This is the same as the results of a study conducted by Susilawati and Rista Rahmawati (2021) which found that of 132 respondents who suffered from DM, 127 respondents (62.3%) of whom were aged 45 years where that age had a risk of 18,143 times compared to respondents who had diabetes. <45 years old (Gunawan and Rahmawati, 2021).

From this research, it was found that there were 12 high school education (High School) people (52%) which were in the low education category (SD, SMP, SMA). This is similar to a

research study conducted by Dian Lukman Hakim (2018) which found that of the 28 respondents, most had less prevention, namely the lack of respondents updating or updating information on health, especially DM (Hakim, 2018). Several research studies say that education affects a person's health where the higher the education, the better a person's awareness in maintaining health. Low education has 1.27 times the risk of suffering from DM than people with higher education. People with low education usually have little knowledge (Siregar, 2020).

The occupation of housewives in this study showed a dominant result of about 44% of the 10 respondents who suffered from DM compared to other occupations (entrepreneurs, laborers, and civil servants). These results are the same as the research study conducted by Cicci Chairunisa Masum, et al (2018) which found that there was no relationship between housework activities and blood sugar levels of housewives with DM (Masum et al., 2018). Several factors that influence the increase in

Variable	Mean	SD	Min-Max	CI; 95 %	N
Pretest	Intervention group	2,23	1,092	1-4	1,57
					2,89
Pretest	Control; group	2,08	0,954	1-4	1,50
					2,65

blood glucose levels include age, body mass index (BMI), food intake, medication adherence, physical activity, and stress (Hasanah, 2019). The same study said that the influence of diet, physical activity, and heredity had a close relationship with increasing blood glucose levels in people with diabetes mellitus (Nababan et al., 2020).

The results of this study found that the dominant sex was female, which is the same as the research conducted by Susilawati and Rista Rahmawati (2021) which found that the female sex had 1.222 times the risk of DM compared to male patients (Gunawan and Rahmawati, 2021) A study conducted by Fakhriza Hidayati Siregar (2020) states the same thing that women are 1.35 times more prone to diabetes than men (Siregar, 2020).

Dietary Habit

The results showed that the majority of respondents with a good diet were 21 people (91.30%). Diet is food intake that provides a variety of amounts, schedules and types of food that a person gets. Improper dietary arrangements as recommended 3J (Schedule,

Amount and Type) can result in an increase in blood sugar levels. The results show that there is a relationship between diet and blood sugar levels in people with Diabetes Mellitus at the Tembok Dukuh Health Center Surabaya. Respondents are advised to maintain stable blood sugar levels by setting the right diet in accordance with the 3J recommendation (Schedule, Amount and Type) (Susanti and Bistara, 2018). Consumption of fatty and sweet foods has a significant relationship with the rate of diabetes mellitus. The addition of oil and coconut milk is a parameter in fatty foods. Oil and coconut milk are foods that have a fairly high fat content (Susilowati and Waskita, 2019).

Physical Training

The results showed that the majority of respondents with good physical exercise were 16 people (69.56%). The increasing incidence of type 2 diabetes mellitus is due to changes in lifestyle (diet and activity levels) and obesity problems (Sornoza O., Ariana K., Mendoza S., Humberto D., 2012). Intensive blood glucose control can reduce diabetes mortality by reducing complications (Kim M.J., Kwon S., 2010).

Foot Care

The results showed that the majority of respondents did not take good foot care as many as 15 people (65.22%). Diabetic foot care is one of the appropriate health promotion actions for people with diabetes mellitus, especially the elderly who are at risk of developing diabetic ulcers. This is evident from several studies, one of which is according to Ariyanti (2012) that foot care has a significant relationship to the risk of diabetic foot ulcers with p value = 0.003 this indicates that good foot care has the opportunity to prevent the risk of diabetic ulcers 11.3 times compared to poor foot care. In addition, according to family-based education programs, it is effective to improve foot care behavior in Diabetes Mellitus patients so that they can integrate family-based foot care education programs into the health care program as an effort to prevent diabetic feet in Diabetes Mellitus patients. With the program from the Puskesmas, it is hoped that the whole community can do early prevention of Diabetic Ulcers because the implementation of this foot care is one of the actions that should be understood by all people with Diabetes Mellitus. (Sari, 2016).

Medication Compliance

The results showed that the majority of respondents took good medication compliance as many as 20 people (86.96%). Patients with type 2 diabetes mellitus with comorbidities will indirectly consume more complex types of drugs. Complex types of drugs such as the number of drugs, frequency of administration, dosage forms, and also specific drug administration instructions can trigger non-compliance (Ilham et al., 2021). The results of research conducted by Iktiyas Budi Handayani (2012) mengatakan bahwa, dari 71 responden sebanyak 40 (85%) patients are more obedient to taking drugs with a number of <5 types of drugs, the others are in the category of low and moderate adherence. Indirectly, type 2 diabetes mellitus patients with comorbidities will consume more complex types of drugs. Complex types of drugs can trigger non-adherence.

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Blood Sugar Monitoring

The results showed that the majority of respondents did good blood sugar monitoring as many as 20 people (86.96%). The standard of checking blood sugar levels in health services is carried out at least once every three

months after the first visit. The American Diabetes Association (ADA) recommends that the ideal level for fasting blood sugar is 80-120 mg/dl (American Diabetes Association, 2018). The results showed that there was an effect of monitoring blood sugar and adherence to taking medication on the stability of blood sugar levels (Rahmani, 2014).

Self-Care Activities for Diabetes Mellitus Patients

Based on the results of the study described in table 4.3, it is known that from 23 respondents, most of the 17 respondents (74%) with diabetes mellitus were known to do self care activities, 6 respondents (26%) with diabetes mellitus were known to not do self care activities. This is in line with research conducted (Astuti, 2014) that all respondents (n-92) perform self-management on average 3.9 days (a week. Respondents have the highest self-management, namely on medication with an average of 5.8 days a week, and diet with an average of 5 days). ,5 days a week, the lowest self-management of respondents, namely self-monitoring of blood glucose with an average of 1.3 days a week, doing physical exercise with an average of 1.7 days (SD±2.0) a week, and perform foot care with an average of 3.3 days (SD±1.4) a week Self care is the key in comprehensive management of chronic disease Effective DM self-management is obtained if individuals have the knowledge and skills to manage DM independently. Successful self-management requires the active participation of patients, families and communities (Rahmawati, Tahlil and Syahrul, 2016).

CONCLUSIONS

The majority of respondents are 45-59 years old by 43%, high school education (high school) as much as 52%). The most dominant occupations of respondents in this study were housewives (44%) and female (57%). the majority of respondents with a good diet are 21 people (91.30%), good physical exercise are 16 people (69.56%), foot care is not good as many as 15 people (65.22%), taking good medicine as many as 20 people (86.96%) and good blood sugar monitoring as many as 20 people (86.96%). the majority of respondents with a level of compliance as many as 17 people (74%) and non-compliance as many as 6 people (26%). It is hoped for further research to conduct research on the factors that cause the failure of DM patients to carry out self-care.

Acknowledgement

This collaborative research cannot be separated from the support from the Head of the Medan Health Sciences College and the Head of the Nursing Department of the Medan State Health Polytechnic who provided opportunities ranging from permits and financial assistance so that this research could be completed for one year from January to December 2021 as well as inputs. input related to the research content provided by the Reviewer Team and also the Head of the Research and Community Service Institute.

Funding Source

The source of funding for this collaborative research came from funding from the Institute for Research and Community Service, Medan Health Sciences College and the Department of Nursing, Medan State Health Polytechnic.

Conflict of Interest

This research has not have publication concerns any commercial product, either directly or indirectly and financial or other interest in the product or distributor of the product.

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