Original Article

Dietary pattern adherence in patients with type II diabetes mellitus

Tiara Fatma Pratiwi[1] | **Achmad Wahdi[2]** | **Novia Susanti[3]** |
Hakim Tobroni HR[4] | **Rickiy Akbaril Okta Firdaus[5]**

[1]Akper Bahrul Ulum Jombang Indonesia
[2]STIKes Bahrul Ulum Jombang Indonesia
[3]STIKes Darul Azhar Tanah Bumbu Indonesia
[4]STIKes Bhakti Mulia Kediri Indonesia
[5]STIKes Insan Cendekia Medika Jombang Indonesia

contact
pratiwitiara277@gmail.com

Received : 22/06/2021
Revised : 12/07/2021
Accepted : 16/07/2021
Online : 23/07/2021
Published : 31/08/2021

Abstract

Aims : Modern lifestyle with many choices of food menus that contain high glucose results in non-adherence to diet in patients with diabetes mellitus. The purpose of this study was to determine the description of dietary non-compliance in patients with type II diabetes mellitus.

Design : This type of research is descriptive research. The population is 50 people at the age of 30-60 with a sample of 46 respondents.

Methdos : The independent variable is non-adherence to diet in patients with type II diabetes mellitus. The research instrument used a diet questionnaire and analyzed with descriptive frequency.

Results : : The results showed that from 46 respondents, most (63.0%) had a diet with low adherence.

Conclusions : Patients with Type II Diabetes Mellitus in RT 02 Wonokromo mostly have a low level of adherence and are expected to add insight and knowledge about dietary adherence in people with diabetes mellitus and further research can be developed based on other factors in the hope of new insights.

Keywords: Dietary, Non-Compliance, Type II Diabetes Mellitus

INTRODUCTION

Diabetes Mellitus is a disease that is quite prominent among other diseases. Diabetes mellitus is known as a common chronic disease, usually occurring in adults who require continuous medical supervision and self-care education for patients (1). Every individual must pay attention to eating patterns in daily life, food patterns are eating habits which include the amount, frequency and type or type of food and the determination of food consumption patterns must pay attention to the nutritional value of food and the adequacy of recommended nutrients.

Diabetes has become the 4th leading cause of death in the world. In 2012 there were 4.8 million deaths directly caused by diabetes. In 2030 it is predicted that there will be 52 million deaths per year due to non-communicable diseases such as diabetes mellitus along with the increase in risk factors due to lifestyle changes, emotional mental disorders with changes in the physical environment and the development of an increasingly modern world (Depkes RI, 2010). The statistical report from the *International Diabetes Federation* (IDF)

states that in 2012 there were more than 371 million diabetics with each year the incidence of diabetes increased by 3% or an increase of 7 million people.

Diabetes mellitus is a metabolic disease caused by increased blood sugar levels due to diabetes. decreased insulin secretion in the pancreas. High blood sugar levels. Diabetes mellitus is influenced by various things such as diabetes drugs, diet, diet, physical activity, obesity and stress (2). Diet is a habitual response or behavior related to food consumption including the type of food, the amount and time of consuming food. The factors that influence the diet are: pleasure, culture, religion, socioeconomic level and the natural environment. These factors will show a lifestyle that is indicated by eating behavior which ultimately affects health and nutritional status (3). An imbalance in diet will have a negative impact on the health of the body, especially on the body's digestive system so that it will cause various kinds of digestive diseases, one of which is Diabetes Mellitus.

The solution to prevent errors in choosing the recommended diet for people with diabetes mellitus, health workers can provide counseling and counseling to residents, its function is to increase knowledge about how to choose the right diet for people with diabetes so that it does not cause a bad impact on public health and provide motivation to local residents that the right diet can have a very good impact on people with Diabetes Mellitus.
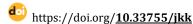
Blood glucose level is a term that refers to the level of glucose in the blood. Blood sugar concentration, or serum glucose level, is tightly regulated in the body. Generally, blood sugar levels stay within narrow limits throughout the day (70 mg/dl – 150 mg/dl)

Blood sugar level is the amount of glucose content in blood plasma (4) Blood sugar levels are used to establish the diagnosis of DM. For determination of diagnosis, the recommended examination is enzymatic examination with venous plasma blood material. Meanwhile, for the purpose of monitoring the results of treatment can use capillary blood sugar examination with a *glucometer* (5).

Food patterns are eating habits that include the amount, frequency and type or type of food. Determination of food consumption patterns must pay attention to the nutritional value of food and the adequacy of recommended nutrients. This can be achieved by serving varied and combined dishes, food availability, types and types of food ingredients are absolutely necessary to support these efforts. In addition, the amount of food consumed also ensures the fulfillment of the nutritional needs needed by the body (6)

METHODS

The research design used a *descriptive,* which aims to describe dietary non-compliance in patients with type II diabetes mellitus. The population in this study were all people with diabetes mellitus in RT 02 from the age of 30 years to the age of 60 years as many as 50 people. Sampling in this study using techniques *Probability Sampling* type *Simple Random Sampling* in the amount of 46 respondents. The research instrument used a diet questionnaire and analyzed with descriptive frequency.

RESULTS

1. The frequency of based on age respondents

The results of research on age characteristics According to Prof. Dr. Koesoemato Setyonogoro which is divided based on the age of early adulthood between 21-35 years, middle adult age between 36-45 years, late adult age between 46-59 years, early elderly between 60-74 years, old elderly between 75-90 years obtained in table 1 below:

Tabel 1 Distribution of the frequency of based on age respondents

Age Characteristics	Patients of Diabetes Mellitus Type II	
	Frequency	Percentage
	N	%
Early Adulthood 21-35	6	13,0
Middle Adult 36-45	14	30,4
Late Adult 46-59	16	34,8
Early Adult 60-74	10	21,7
Eldery 75-90	0	0
Total	46	100

Sumber: Data Primer 2021.

Based on table 1, shows that from 46 respondents, almost half of the respondents (34.8%) were aged 46-59 years.

2. The frequency of based on gender respondents

Table 2 Distribution of the frequency of based on gender respondents

Gender	Patients of Diabetes Mellitus Type II	
	Frequency	Percentage
	N	%
Male	27	58,7
Female	19	41,3
Total	46	100

Sumber: Data Primer 2021

Based on table 2, it shows that the from 46 respondents, most of them (58.7%) are male.

3. The frequency of based on occupation respondent:

Table 3 Distribution of the frequency of based on occupation respondents

Occupation	Patients of Diabetes Mellitus Type II	
	Frequency	Percentage
	N	%
Working	35	76,0
Not Working	11	24,0
Total	46	100

Sumber: Data Primer 2021

Based on table 3, it shows that from 46 respondents almost all respondents (76.0%) work.

4. The frequency of based on education respondent:

Table 4 Distribution of the frequency of based on education respondents

Education	Patients of Diabetes Mellitus Type II	
	Frequency	Percentage
	N	%
Primary School	0	0
Junior High School	44	95,7
Senior High School	2	4,3
Total	46	100

Sumber: Data Primer 2021

Based on table 3, it shows that from 46 respondents, almost all respondents (95.7%) have a junior high school

5. The frequency of based on dietary compliance respondent:

Table 5 Distribution of the frequency of based on dietary compliance respondents

Dietary Compliance	Patients of Diabetes Mellitus Type II	
	Frequency	Percentage
	N	%
Low Compliance	29	63,0
High Compliance	17	37,0
Total	46	100

Sumber: Data Primer 2021

Based on table 3, it shows that that from 46 respondents, most of them (63.0%) have a low-adherence diet.

DISCUSSION

Based on table 5, most of 46 respondents (63.0%) have a low-adherence diet. The results of filling out questionnaires and interviews, obtained in people with diabetes mellitus, many people with diabetes mellitus still consume foods and drinks that taste sweet or contain a lot of sugar and show that of 46 respondents most (58.7%) still consume foods containing sugar. In addition, the habit of eating on time according to a schedule that has been consulted by a doctor or other health worker is still rarely carried out for the most part or shows a number (69.6%). In addition, the habit of consuming *fast food is* still often done by half (50%) of the respondents. Almost half of the respondents (43.5%) still rarely adhere to the diet or think that the eating schedule or diet for people with diabetes mellitus still feels heavy.

Black & Hawk (7) explained that one way to reduce the risk of complications and recurrence of diabetes mellitus is to adhere to the application of a diabetes mellitus diet. Patients with diabetes mellitus should pay more attention to diet compliance because adherence to diet is one of the factors to stabilize blood sugar levels to normal and prevent unwanted complications. There are several factors that can influence a person not to comply with the diabetes mellitus diet, namely lack of knowledge about diabetes mellitus, attitudes, beliefs, and beliefs about diabetes mellitus. Disobedience to the diabetes mellitus diet will cause acute and chronic complications which in the end can worsen and even cause death to the sufferer.

Smeltzer & Bare (8) stated that diet is the main therapy for people with diabetes mellitus, so every patient should have a positive (supportive) attitude towards diet so that complications, both acute and chronic, do not occur. If the patient does not have a positive attitude towards the diabetes mellitus diet, complications will occur and will eventually lead to death, in order to maintain the quality of life and avoid complications from diabetes mellitus, every patient must follow a diabetes mellitus diet. The attitude of people with diabetes is strongly influenced by knowledge, in this case the knowledge of patients about diabetes mellitus is very important because this knowledge will bring people with diabetes mellitus to determine attitudes, think and try not to get sick or reduce their disease conditions.

A modern lifestyle with many choices of food menus and unhealthy ways of life as well as the habit of consuming fast food, such as foods and drinks that are high in sugar, high in fat and salt have become a habit of modern society today which then triggers the emergence of diseases due to diet. One of them is Diabetes Mellitus or blood sugar disease. Several factors that can influence non-compliance are age. Based on table 5.1 shows that of the 46 respondents, most (34.8%) are aged between 46-59 years. (9) suggests that the older a person's age, the mental development process can improve, but at a certain age the increase in the mental development process is not as fast as when a patient with diabetes mellitus who has age > 35 years tends not It is easy to receive developments or information that shows the degree of health this is because the thinking process that is owned has decreased in terms of remembering and accepting something new. A respondent with

diabetes mellitus who is >35 years old will find it difficult to receive information about health which in turn will reduce knowledge.

The next factor is education. The research results are obtained based on table 4 which shows that from 46 respondents, almost all respondents (95.7%) have a junior high school. Notoatmojo (10) states that education is a learning process activity to develop or improve certain abilities so that the educational targets can stand alone. The lower the level of education, the lower the ability that a person will have in addressing a problem. A patient with diabetes mellitus who has a low educational background or is junior high school, tends to be unable to accept new developments, especially those that support health status. This is because basic education is a level of education to simply introduce new knowledge to someone without any process of reasoning and balancing of a science. Receiving respondents who have a low educational background will have difficulty receiving new information because the thought process that has been embedded in them is only temporary because there is no sufficient reasoning process from the diabetes mellitus sufferer itself due to their educational background

The next factor is work. The results obtained based on table 5.3 show that of the 46 respondents, most of them (63.0%) have jobs as entrepreneurs. Work is a way to meet needs and work will have an influence on information and knowledge about health (Mubarak, 2015). Respondents who work will tend to spend their time on the activities of their workers thereby reducing the time to be able to make visits to health care centers that are useful for their health status. However, if in the work activities carried out, a person with diabetes mellitus can still take the time available to obtain information about the diabetes mellitus diet, it will make people with diabetes mellitus understand and understand the importance of implementing a diabetes mellitus diet as a way to maintain normal blood conditions.

In Wonokromo Village, RT 02, there are residents who suffer from diabetes mellitus where they never pay attention to the diet that should be considered, because they are busy with work and the low level of education they have and ignore the food they consume when they finish work and because of economic factors that affect them. This causes them to have to work hard to meet the needs of life regardless of the food that is recommended and not recommended for people with Diabetes Mellitus, this will cause blood sugar levels of people with diabetes mellitus to increase due to irregular food intake consumed by people with diabetes mellitus.

CONCLUSION

Patients with Type II Diabetes Mellitus in RT 02 Wonokromo mostly have a low level of adherence and are expected to add insight and knowledge about dietary adherence in people with diabetes mellitus and further research can be developed based on other factors in the hope of new insights.

REFERENCES

1. LeMone P, Burke KM, Bauldaff G. Buku ajar keperawatan medikal bedah. In 2015.
2. Fauzi I. Buku Pintar Deteksi Dini Gejala, \& Pengobatan Asam Urat. Diabetes \& Hipertens Yogyakarta Araska. 2014;
3. Pratiwi RA, Dieny FF. Hubungan skor frekuensi diet bebas gluten bebas casein dengan skor perilaku autis. Diponegoro University; 2014.
4. Paramitha GM. Hubungan Aktivitas fisik dengan kadar gula darah pada pasien diabetes melitus tipe 2 di Rumah Sakit Umum Daerah Karanganyar. Universitas Muhammadiyah Surakarta; 2014.
5. Indonesia PE. Konsensus pengelolaan dan pencegahan DM tipe 2 di Indonesia. Jakarta PB PERKENI. 2011;
6. Supariasa IDN, Bakri B, Fajar I. Assessment of nutritional status. Jakarta EGC. 2002;48–9.
7. Black JM, Hawks JH. Keperawatan Medikal Bedah; Manajemen klinis untuk hasil yang diharapkan. 2014;
8. Smeltzer SC, others. Keperawatan medikal bedah brunner \& suddarth. In 2013.
9. Singgih, D. G. Psikologi Remaja. Yogyakarta: Kreasi Wacana; 2015.
10. Notoatmodjo S, Krianto T, Hassan A, Mamdy Z. Promosi kesehatan global. 2013;