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The Relationship Between Behavior Of Type II Diabetes Mellitus Patients With Diet Therapy Compliance In Medan Selayang Area Year 2020

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ABSTRACT

Diabetes Mellitus is a metabolic disorder caused by a lack of the hormone insulin to process carbohydrate metabolism normally, adherence is the level of patient carrying out the method of treatment and behavior recommended by a doctor or by others. Insulin has a major role in regulating glucose levels in the blood, namely entering glucose into cells. This study aims to analyze the relationship between the behavior of type II diabetes mellitus sufferers and adherence to dietary therapy in Medan Selayang District in 2020 which was carried out from May to August 2020, with a correlation description design using the total sampling technique of 58 type II DM sufferers who participated in this study. . Data collection using a questionnaire sheet. Data analysis was performed using univariate analysis and then using Spearman's correlation test to see a significant relationship between the behavior of type II DM patients and adherence to diet therapy. The results of the study showed that there was a significant relationship between the behavior level of type II DM sufferers and adherence to diet therapy (Sig. (2-tailed) = 0.03, r = 0.59) where out of 58 people (75.9%) had type II Diabetes Mellitus In moderate behavior there were 33 people (56.9%) who did not comply with diet therapy and 11 people (19.0%) adhered to diet therapy. So it can be concluded that there is a significant relationship between the behavior of type II DM sufferers and adherence to diet therapy in Medan Selayang District in 2020.

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1. INTRODUCTION

The general public has not or are not aware that prepared food has experienced a lot of loss of essential food components, especially fiber. Fast food also generally has a high fat and protein content, but is poor in fiber. Fiber intake that is too low for a long time will affect health, obesity, and degenerative disease attacks, one of which is diabetes mellitus.Kusnanto, 2019).

Diabetes is currently a disease that is starting to infect people in developing countries like Indonesia. WHO estimates that by 2030 around 21.3 million Indonesians will have diabetes. According to the chairman of the Indonesian Diabetes Association (Persadia) (Hariwijaya, 2014), type 2 DM is the most common, which is around 95% of all diabetes cases. Type 2 Diabetes Mellitus is diabetes that is not related to insulin. Risk factors for type 2 diabetes include food consumption, such as consuming sugar-sweetened drinks such as soft drinks and fruit drinks (packaged fruit drinks) and consuming less vegetables and fruits.(Lanywati, 2016).The overall prevalence of diabetes is around 6% of the population, 90% of which are type 2 diabetes. The number of diabetics globally continues to increase every year. According to data published in the journal Diabetes Care in 2014, diabetics in Indonesia in 2016 reached 8.4 million people and were ranked 4th after India, China and the United States. This number is expected to more than double by 2030, namely to 21.3 million people(Munawar, 2019).

Diabetes Mellitus (DM) is a metabolic disease caused by a lack of the hormone insulin to process carbohydrates normally. Insulin has a major role in regulating glucose levels in the blood, namely entering glucose into cells. Diabetes Mellitus is defined as a metabolic disease that is included in the group of blood sugar that exceeds normal limits or hyperglycemia (more than 120 mg/dl or 120 mg%)

(Harista, 2017).

Compliance is a term that describes the use of drugs according to the instructions on the prescription. This includes using it at the correct time and following applicable food restrictions. The fact that most people who suffer from pain will make efforts to eliminate or reduce the pain they suffer. However, not a few people who carry out these healing efforts fail to comply with the therapeutic procedures recommended by health workers and pharmacists, resulting in therapy failure and the emergence of more dangerous side effects from the illness they are suffering from.

Based on the preliminary study obtained by researchers from 12 people with DM in Medan Selayang District said, 2 people did not know about type II DM diet therapy, 2 people did not understand about type II DM therapy, 2 people could not solve problems related to DM therapy, 2 people were unable to carry out type II DM diet therapy, 2 people were unable to plan type II DM diet therapy, and 2 people were unable to differentiate DM diet therapy from other disease diet therapies.

2. METHOD

The design used in this study was cross sectional with a correlation with the study research design which aims to determine the relationship between the Behavioral Level of Type II Diabetes Mellitus Patients and Diet Therapy Compliance in type II DM patients in Medan Selayang District in 2020 (Nursalam, 2015). The research was conducted in Medan Selayang District in 2020. This research was conducted in May – August 2020. The population in this study were all type II diabetes mellitus patients who were registered in Medan Selayang District with a total of 58 people. Researchers used a total sampling technique, namely a sampling technique with all populations used as a sample of 58 people.

3. RESULTS AND DISCUSSION

Table 1 Distribution and Percentage of Respondents' Education in Medan Selayang District

Characteristics Education	F	(%)
SD	6	10.3
JUNIOR HIGH SCHOOL	15	25.9
SENIOR HIGH SCHOOL	24	41.4
Diploma	13	22.4
Amount	**58**	**100**

Data was obtained that from 58 respondents, 24 of them had high school education (41.4%).

Table 2. Distribution and Percentage of Respondents' Occupation in Medan Selayang District

Job Characteristics	F	(%)
PNS / TNI / POLRI	8	13.8
Peg. Private / Entrepreneur	36	62.1
Laborer	10	17.2
Farmer	4	6.9
Amount	**58**	**100**

Data was obtained that from 58 respondents, the majority of 36 people had jobs as private employees/self-employed (62.1%).

Table 3 Frequency Distribution and Percentage of Respondents' Income in Medan Selayang District in 2020

Characteristics of Income/month	F	(%)
< Rp. 700,000	16	27.6
Rp. 700,000 – Rp. 1,400,000	29	50
> IDR 1,400,000	13	22.4
Amount	**58**	**100**

Data obtained that from 58 respondents, the majority 29 people have an income of Rp. 700,000 – Rp. 1,400,000 (50%).

Behavioral Level of Type II Diabetes Mellitus Patients

Assessment of the level of respondent behavior in general in this study is categorized into three categories, namely good, moderate and bad as in the following table:

Table 4. Frequency Distribution and Percentage Level of Respondent Behavior in Medan Selayang District

No	Behavior Level	F	(%)
1.	Bad	8	13.8
2.	Currently	44	75.9
3.	Well	6	10.3
	Amount	**58**	**100**

Shows that the level of behavior of the majority of respondents at the moderate level (75.9%).

Description of Respondent Behavior Level in Detail.

Detailed assessment of respondents' behavior level in this study was categorized into five categories, namely, behavior regarding diabetes mellitus, diet therapy goals, dietary requirements for diabetes mellitus, risk factors for diabetes mellitus and complications of diabetes mellitus, as in the following table

Table 5. Frequency Distribution and Percentage of Respondent Behavior Levels in Detail in Medan Selayang District

No	Behavior Level	F	(%)
1	**DM disease**		
	- Bad	5	8,6
	- Currently	13	22,4
	- Well	40	69.0
	Amount	**58**	**100**
2	**Diet Therapy Goals**		
	Bad	18	31.0
	Currently	37	63,8
	Well	3	5,2
	Amount	**58**	**100**
3	**DM Diet Requirements**		
	Bad	18	31.0
	Currently	33	56,9
	Well	7	12,1
	Amount	**58**	**100**
4	**DM Risk Factors**		
	Bad	5	8,6
	Currently	18	31.0
	Well	35	60,3
	Amount	**58**	**100**
5	**DM complications**		
	Bad	16	27,6
	Currently	42	72,4
	Well	-	-
	Amount	**58**	**100**

Shows that the level of behavior of the majority of respondents is being, namely; therapeutic goal 63, 8% ; dietary therapy requirements 56.9%; complications of diabetes mellitus 72.4%.

Diet Therapy Compliance Rate

To identify the level of compliance of respondents, used a questionnaire consisting of 10 statements. The level of compliance is divided into 2 levels as shown in the following table:

Table 6. Frequency Distribution and Percentage of Respondent Compliance Levels in Medan Selayang District

No	Compliance Level	F	(%)
1.	Not obey	44	75.9
2.	obey	14	24.1
Amount		**58**	**100**

Shows that the majority of respondents do not comply (75.9%).

Table 7. Cross Tabulation of Behavior of Type II DM Patients with Adherence to Diet Therapy in Medan Selayang District

Behavior Patients with Type II DM	Obedience				Total	
	obey		Not obey			
	n	%	n	%	N	%
Bad	-	-	8	13,8	8	13,8
Currently	11	19.0	33	56,9	44	75.9
Well	3	5,2	3	5,2	6	10,3
Amount	**14**	**24,2**	**44**	**75.9**	**58**	**100**

It can be seen that from 13.8% the behavior of DM sufferers is in the bad category, where 13.8% are declared disobedient in carrying out dietary therapy. Of the 75.9% behavior of type II DM sufferers in the moderate category, where 56.9% were declared disobedient and 19.0% were declared obedient. From 10.3% the behavior of type II DM sufferers was in the good category, where 5.2% were declared disobedient and 5.2% were declared obedient.

Correlation between Behavioral Level of Type II Diabetes Mellitus Patients and Compliance with Diet Therapy

The results of data analysis using the Spearmann correlation test showed that the behavior level of type II diabetes mellitus patients with adherence to diet therapy had a significant relationship as shown in the following table:

Table 8. Correlation Test of Behavioral Levels of Type II Diabetes Mellitus Patients with Adherence to Diet Therapy in Medan Selayang District

Free Variables	Dependent variable	R	*Sig*(2-tailed)
Level of behavior of people with type II diabetes mellitus	Adherence to dietary therapy	0.59	0.003

Shows that there is a relationship between the level of behavior of type II diabetes mellitus sufferers and adherence to diet therapy where the value of Sig (2-tailed) is 0.03 <0.05.

Behavioral Level of Type II Diabetes Mellitus Patients

The results showed that the majority of respondents had a moderate level of behavior (75.9%) in the range 27 - 33. This was assumed because in this study the respondents generally had a high school

formal education level (41.4%)(Pramadji, 2017)states that formal education will basically give a person the ability to think rationally and objectively in dealing with life's problems and will have an impact on the emergence of a process of developing or maturing a personal view of life. The higher the level of one's education is expected to be followed by the higher the level of one's behavior. If education is low, then behavior regarding healthy living tends to be lacking, especially the ability to live healthy for oneself. It can be assumed that formal education affects the behavior of people with type II diabetes mellitus, where the higher the level of education, the behavior will also be higher (Suryono, 2018).

Level of Compliance with Diet Therapy

Shows that the majority of respondents are not compliant in carrying out diet therapy (75.9%). This shows that the level of client compliance in implementing diet therapy is still very low. From the results of this study it can be concluded that high levels of behavior are not always followed by changes in behavior such as adhering to diet therapy, this is also influenced by several factors, one of which is the environment, socio-economic, experience and motivation. It is also said that adhering to a diet program is the result of a process of permanent behavior change that requires strong motivation and belief (Tandra, 2015).

Correlation between Behavioral Level of Type II Diabetes Mellitus Patients and Compliance with Diet Therapy

Results of data analysis using the Spearmann correlation test, obtained the results of the correlation coefficient (r) 0.59 with sig. (2-tailed) 0.03. The correlation coefficient (r) is 0.59, meaning that the relationship between the behavior level of type II diabetes mellitus patients and adherence to diet therapy is positive with moderate interpretation. Sig (2-tailed) 0.03 <0.05 level of significant (α) means that there is a significant relationship between the behavior level of type II diabetes mellitus sufferers and adherence to diet therapy.

The results of this study are supported by (Tjokroprawiro, 2017) which says that the behavior level of a person with DM is related to adherence to diet therapy depending on various variables such as age, education, and economy. There is also the opinion of some people who say that there are several factors that can influence changes in client behavior to become obedient or non-adherent to treatment programs obtained through health education, namely predisposing factors, supporting factors and driving factors (Alfian R2015).

Predisposing factors are the main factors that exist within the individual which are manifested in the form of behavior, attitudes, beliefs and beliefs. Supporting factors are factors outside the individual such as economic status/income where the level of income will affect the lifestyle of individuals especially in big cities such as increased ready-to-eat food which can increase blood sugar levels and lack of physical activity, support and participation of the family in implementing the diet program, community attention both in the living environment and the workplace environment greatly influences the client's behavior towards client compliance in carrying out the diet program. The driving factor is closely related to the factors that motivate individuals to behave (Perkeni, 2016)

From the description above, the researchers assume that there is a relationship between the behavior level of type II DM sufferers and adherence to diet therapy in Medan Selayang B District 2017, this is because the level of behavior of respondents is moderate, but the awareness/motivation of respondents is still not optimal, because motivation is a force which encourages individuals to behave in a certain way in order to achieve goals to meet their needs/desires, in this case the urge to behave obediently or not to comply with the diabetes mellitus diet program (Perwira, 2017).

4. CONCLUSION

The conclusions from this study are:The majority of respondents had a moderate level of behavior (75.9%), the majority of respondents were disobedient in carrying out diet therapy (75.9%). There was a significant relationship between the level of behavior of people with diabetes mellitus and adherence to diet therapy (r = 0.58, and p = 0.03).

REFERENCE

[1] Kusnanto.(2019). Faktor pendukung dan penghambat penderita diabetes melitus dalam melakukan pemeriksaan glukosa darah. *Global Medical and Health Communication*.
[2] Harista.(2017). Depresi pad penderita Diabetes Mellitus Tipe 2. Jurnal : Fakultas Kedokteran. Universitas Lampung.
[3] Hariwijaya.(2014). Pencegahan dan Pengobatan Penyakit Kronis. Edsa Mahkota, Jakarta.
[4] Lanywati, E.(2016). Diabetes Mellitus Penyakit Kencing Manis. Penerbit Kanisius, Yogyakarta.
[5] Munawar.(2019). Hubungan Penampilan Makanan, Rasa Makanan dan Faktor Lainnya dengan Sisa Makanan (Lunak) Pasien Kelas 3 di RSUP DR Hasan Sadikin Bandung. Tesis : FKM UI, Jakarta.
[6] Notoatmodjo, S.(2016). Promosi Kesehatan dan Ilmu Perilaku. Rineka Cipta, Jakarta.
[7] Nursalam. (2015). Konsep dan Penerapan Metodologi Penelitian Ilmu Keperawatan. Salemba Medika, Jakarta.
[8] Pramadji, D,K. (2017). Perencanaan Menu Untuk Penderita Diabetes Melitus. Penebar Swadaya, Jakarta.
[9] Rohani, R., & Ardenny, A. (2018). Analisis faktor yang berhubungan dengan kepatuhan diet penderita diabetes melitus. *JPK: Jurnal Proteksi Kesehatan*.
[10] Suryono, S., (2018). Penatalaksanaan diabetes mellitus terpadu, cetakan ke lima, FKUI, Jakarta.
[11] Tandra, H. (2015). Segala Sesuatu Yang Harus Anda Ketahui Tentang DIABETES. PT Gramedia Pustaka Utama, Jakarta.
[12] Tjokroprawiro, A., (2017). Hidup Sehat dan Bahagia Bersama Diabetes Mellitus. PT Gramedia Pustaka Utama, Jakarta.
[13] Alfian R., (2015), Korelasi Antara Kepatuhan Minum Obat dengan Kadar Gula Darah pada Pasien Diabetes Melitus Rawat Jalan di RSUD Dr. H. Moch. Ansari Saleh Banjarmasin.
[14] Perkeni, (2016). Pengelolaan dan Pencegahan Diabetes melitus Tipe 2 di Indonesia. Perkeni, 2016. Pengelolaan dan pencegahan diabetes melitus tipe 2 di Indonesia.
[15] Perwira I.R., (2017), Sistem Untuk Konsultasi Menu Diet Bagi Penderita Diabetes Mellitus Aturan, Jurnal teknologi, 2, pp.104–113.