DESCRIPTION OF KNOWLEDGE, FAMILY SUPPORT AND DIETARY COMPLIANCE IN OUTPATIENTS WITH TYPE II DIABETES MELLITUS AT THE NANGGALO HEALTH CENTER IN 2024

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Abstract

The prevalence of people with diabetes mellitus in Indonesia increased from 6.9% in 2013 to 8.5% in 2018. This study aims to determine the description of knowledge, family support and dietary compliance of outpatient type II diabetes mellitus patients at the Nanggalo Community Health Center in 2024. This research is a descriptive study with a Cross Sectional Study design, carried out from December 2023 – June 2024 at the Nanggalo Community Health Center. Sampling used the Non-Probability Sampling technique using the Accidental Sampling method, namely a sample of 27 people. The results of the analysis showed that 55.6% had sufficient knowledge about diabetes mellitus, 66.6% had insufficient family support, and 85.2% did not comply with the diet with the lowest compliance data being the amount of food.

Keywords: *diet complience, knowladge, family support*

1. INTRODUCTION

Diabetes mellitus (DM) or commonly known as diabetes is a disease that causes a prolonged metabolic disorder in the body because the insulin hormone content in the body cannot be utilized optimally to control glucose balance, thereby increasing the concentration of sugar levels in the blood (hyperglycemia).[1] The prevalence of people with DM based on blood tests in the population aged ≥ 15 years has increased from 6.9% in 2013 to 8.5% in 2018. West Sumatra Riskesdas data in 2018 reported that the prevalence of diabetes mellitus in West Sumatra was 1.64% which was 21st out of 34 provinces in Indonesia. This figure has increased from 2013, namely 1.3%.[2]

Data from the 2023 Indonesian Health Survey reports that the prevalence of diabetes mellitus in West Sumatra is 1.6%. [3] Based on doctors' diagnoses among residents of all ages, Padang City ranks second highest in people with diabetes mellitus (1.79%) out of 19 regencies/cities in West Sumatra with the highest prevalence of DM, namely in Kota Pariaman (2.23%).[2]

Management of diabetes mellitus is known as 4 main pillars, namely education, meal planning/diet, physical exercise and pharmacological therapy. Diet therapy is the main and most important component in the successful management of diabetes mellitus, therefore diabetes mellitus patients must be able to regulate their diet according to the principles of the diabetes mellitus diet so that blood sugar remains controlled.[3]

There are several factors that influence the implementation of dietary compliance in diabetes mellitus sufferers, including knowledge and family support.[4] [6] Knowledge will create awareness and will cause people to behave in accordance with the knowledge they have. Knowledge is a tool that can help patients carry out diet therapy to treat diabetes mellitus. Knowledge is a very important factor in determining a person's behavior so that it can help control and control blood sugar levels.[5]

Knowledge is a very important factor in determining a person's attitudes and behavior so that they can control and control blood sugar levels. According to Nazriati's research, it shows that the majority (75%) of type II diabetes mellitus patients have moderate knowledge, low knowledge (17.5%) and high knowledge (7.5%).[5] Family support has a significant influence on the success of diabetes management, quality of life, sugar diet and adherence to taking medication.[6] Sulanjari's research shows that almost half of the respondents (42.86%) received good support from the family and adhered to the Diabetes Mellitus diet. In line with Ratnasari's 2020 research, it was stated that those who received good family support and adhered to the DM diet were more than half of the respondents (53.3%), respondents who received sufficient family support and adhered to the DM diet were (20.4%), respondents who received sufficient family support and non-adherence to the DM diet as many as (25%) and respondents who received insufficient family support and did not adhere to the DM diet as much as (2.3%).

The results of the initial survey conducted on December 14 2023, the results of interviews with nutritionists at the Nanggalo Community Health Center, said that DM cases continued to increase every month, and of the cases found, more than half did not undergo re-control. Based on the results of interviews with five patients, it was found that 60% of patients had insufficient knowledge and 60% of patients had poor family support. Based on previous research, it was found that 88.9% of patients had poor eating patterns. Based on these problems, the author conducted research to determine "Image of Knowledge, Family Support and Diet Compliance in Outpatients with Type II Diabetes Mellitus at the Nanggalo Community Health Center in 2024".

2.   METHODOLOGY

This research is descriptive in nature and the research design used is a cross sectional study which aims to determine the description of knowledge, family support and diet compliance in outpatient type II diabetes mellitus patients at the Naggalo Community Health Center in 2024.This research was conducted at the Nanggalo Community Health Center, Padang City. The research will be carried out in December 2023-June 2024. The population in this study were outpatient Diabetes Mellitus patients at the Nanggalo Community Health Center. Research sampling was carried out using a sampling technique, namely non-probability sampling using an accidental sampling method of 27 respondents based on certain criteria.

3.   RESULTS
3.1   Description of Respondent Characteristic

The distribution of research respondents based on age, gender, education, employment and nutritional status can be seen in table 1.

Table 1: *Frekuency Distribution of Respondents Based on Respondent Characteristics at Nanggalo Community Health Center in 2024*

Age	n	%

	n	%
30-49	5	18,5
50-64	14	51,9
>65	8	29,6
Gender	n	%
Man	7	25,9
Woman	20	74,1
Level of Education	n	%
No School	1	3,7
Finished Elementary School	6	22,2
Finished Junior High School	4	14,8
Finished High School	12	44,4
Graduated From College	4	14,8
Work	n	%
Not Working/Retired/IRT	19	70,4
Workers/Farmers	2	7,4
Entrepreneur/Trader	4	14,8
Civil Servants/Military/Police	2	7,4
Nutritional Status Category	n	%
Underwight	0	0
Normal	17	63
Overweight	10	37
Total	27	100

Based on table 1, it can be seen that more than half of the respondents were aged 50-64 years, most of the respondents were female, less than half of the respondents had a high school education, more than half of the respondents were not working/retired/domestic and most of the respondents had normal nutritional status.

3.2 Univariate Data Analysis
3.2.1 Knowledge
Distribution of research respondents based on knowledge can be seen in table 2.

Table 2: *Frequency Distribution of Respondents BASED ON Knowledge at Nanggalo Community Health Center in 2024*

Knowledge	n	%
Good	9	33,3
Enough	15	55,6
Not Enough	3	11,1
Total	27	100

Based on table 2, it can be seen that the majority of respondents have sufficient knowledge, namely 15 people (55.6%).

3.2.2 Family Support
The distribution of research respondents based on family support can be seen in table 3.

Table 3: *Frequency Distribution of Respondents Based on Family Support at Nanggalo Community Health Center in 2024*

Family Support	n	%
Good	9	33,3
Not Enough	18	66,7

	n	%
Total	27	100

Based on table 3, it can be seen that more than half of the respondents have poor family support, namely 18 people (66.7%).

3.2.3 Dietary Compliance

The frequency distribution of respondents based on dietary compliance in terms of numbers can be seen in table 4.

Table 4: Frequency Distribution of Respondents Based on Diet Compliance in Terms of Number at Nanggalo Community Health Center in 2024

	n	%
Amount Compliance		
Compliant	4	14,8
Non-Compliant	23	85,2
Total	27	100

Based on table 4, it can be seen that the majority of respondents did not comply with the diet in terms of numbers, namely 23 people (85.2%).

The frequency distribution of respondents based on diet compliance in terms of type can be seen in table 5.

Table 5: Frequency Distribution of Respondents Based on Diet Compliance in Terms of Type at Nanggalo Community Health Center in 2024

Compliance Type	n	%
Compliant	17	62,5
Non-Compliant	10	37,1
Total	27	100

Based on table 5, it is known that more than half of the respondents adhere to the diet in terms of type, namely 17 people (62.9%). Respondents still consume pure granulated sugar and sweet cakes.

The frequency distribution of respondents based on diet compliance in terms of schedule can be seen in table 6.

Table 6: Frequency Distribution of Respondents Based on Diet Compliance in Terms of Schedule at the Naggalo Community Health Center in 2024

Schedule Compliance	n	%
Compliant	7	25,9
Non-Compliant	20	74,1
Total	27	100

Based on table 6, it can be seen that more than half of the respondents did not comply with the diet in terms of schedule, namely 20 people (74.1%). Obedient respondents were respondents who ate 3 x staple foods and 3 x snacks, namely 7 people (25.9%). Non-compliant respondents are respondents who do not eat 3 x

staple foods and 3 x snacks. Respondents did not comply because most respondents did not eat snacks at night.

The frequency distribution of respondents based on dietary compliance with the 3J principles can be seen in table 7.

Table 7: Frequency Distribution of Respondents Based on Dietary Compliance with the 3J Principles at the Naggalo Health Center in 2024

3J Compliance	n	%
Compliant	4	14,8
Non-Compliant	23	85,2
Total	27	100

Based on table 7, it can be seen that the majority of respondents did not comply with the 3J principle diet, namely 23 people (85.2%)

4. DISCUSSION :

4.1 Knowledge Overview

The research results showed that 55.6% of respondents had sufficient knowledge. As many as 33.3% of respondents had good knowledge and 11.1% of respondents had poor knowledge. Knowledge in this study was measured from 20 questions regarding diabetes mellitus. Knowledge is a very important factor in determining a person's attitudes and behavior so that they can control and control blood sugar levels. In line with previous research on the relationship between knowledge and dietary compliance in diabetes mellitus sufferers, which showed that 60% of respondents had sufficient knowledge and 57.5% of respondents did not comply with the given diet. Knowledge is a very important factor in determining a person's attitudes and behavior so that they can control and control blood sugar levels.[7]

Based on the 20 respondent questionnaire questions, it was found that some respondents had good knowledge about diabetes mellitus, the types of food that are recommended and not recommended. Respondents knew that substitutes for rice as a staple food were noodles, bread and potatoes. Respondents knew that foods that were limited were sweet foods such as granulated sugar, syrup, sweetened condensed milk and sweet cakes. Respondents don't know enough about the amount or amount of food that is recommended to be consumed, this is related to dietary compliance in terms of quantity, some respondents don't know what cooking methods should be used, most respondents choose fried, while this is not recommended because it can cause respondents to overconsume oil/fat.

4.2 Overview of Family Support

The results of research conducted at the Nanggalo Community Health Center showed that 66.6% of respondents had insufficient family support and 33.4% of respondents had good family support. This can be seen from the results of research that has been carried out, namely that the majority of respondents' families did not take respondents to go to the health center for control and did not remind respondents not to consume restricted foods. Family support is the support of children and other family members, in providing support to Diabetes Mellitus sufferers to be able to fulfill their diet.

Respondents live with family and the family knows about the respondent's illness, namely 27 people (100%), more than half of the respondent's family provides inappropriate types of food, namely 14 people (52%), More than half of the respondent's family reminds the patient's eating schedule, namely 14 people (52%), more than half of the respondents allow respondents to consume foods that are not recommended, namely 23 people (85.2%), most of the patient's families encourage them to continue implementing healthy eating patterns, namely 24 people (88.9%) , more than half of the respondent families provided information about recommended and not recommended foods, namely 20 people (74.1%), more than half of the respondent families provided motivation to fight the desire to consume foods that are high in sugar content, namely 20 people (74%), more than half of the respondents were taken to the health center by their families, namely 17 people (63%), more than half of the respondents' families were reminded not to eat dinner, namely 16 people (59.2%).

Based on interviews with patients who feel good family support is that they are always accompanied and accompanied for treatment by their family, so that the family also knows about the management of diabetes mellitus and can provide support to the respondent. The respondent's family also always reminds the respondent not to consume foods that are not recommended, but if you look in more detail at each question item, the respondent's family pays little attention to what foods the respondent is allowed and limited by and the family does not specify which foods should be avoided. by the patient, because eating is not specific, so the patient also consumes the food.

Family support is important for respondents in the healing process, the effect of family support on health and well-being functions simultaneously. The implementation of the DM diet is greatly influenced by support from the family. Support can be described as a feeling of belonging or belief that one is an active participant in daily activities. Feeling connected to other people in the environment creates strength and helps reduce feelings of isolation.[8]

4.3. Overview of Diet Compliance

The results of research conducted at the Nanggalo Community Health Center showed that 85.2% of respondents did not comply with their diet, while 14.8% of respondents complied with their diet. In line with previous research on the relationship between knowledge and family support for diabetes mellitus diet monitoring which stated that more than half of respondents (55%) had poor knowledge, more than half of respondents (56.7%) had less family support and more than half (61.7%) of respondents had poor dietary supervision. 32 This research is also in line with previous research on diet compliance of DM patients based on the level of knowledge and family support which stated that the majority of respondents (91.7%) were not adherent to their diet.[8]

In general, respondents still consume foods that should be limited and avoided for Diabetes Mellitus sufferers, so that regarding the types of food consumed by patients, patients still consume foods that are not recommended for them, such as consuming preserved fish such as anchovies, sweet tea, sweet coffee and cake. . This research found that more than half of the respondents, 62.9%, adhered to their diet in terms of type of food.

In the category, the amount of food consumed by respondents is not in accordance with their needs, namely 85.2% of respondents, the amount of food is less than the diet recommended by nutritionists. In the category of eating schedule, only a few patients

whose eating schedule complies with the recommendation of 3 main meals and 3 snacks. From the results of this study, 74.1% of respondents did not comply with the recommended eating schedule. Most respondents do not eat snacks at night.

5.   CONCLUSIONS

Based on the research results and discussion, the following research conclusions can be drawn:
1.   More than half (55.6%) of respondents have sufficient knowledge regarding Diabetes Mellitus
2.   More than half (66.6%) of respondents have insufficient family support
3.   The majority (85.2%) of respondents did not comply with the diabetes Mellitus diet

6.   ACKNOWLEDGEMENTS

7.   REFERENCES

1.   Febrinasari RP, Sholikah TA, Pakha DN, Putra S. Buku Saku Diabetes Melitus untuk Awam (Edisi I, Issue November). 2020;(November).
2.   Kemenkes RI. Hasil Riset Kesehatan Dasar Tahun 2018. Kementrian Kesehat RI. 2018
3.   PERKENI. Pedoman Pengelolaan dan Pencegahan Diabetes Melitus Tipe 2 Dewasa di Indonesia 2021. Glob Initiat Asthma. Published online 2021:46. www.ginasthma.org.
4.   Suhartatik S. Faktor-Faktor Yang Mempengaruhi Tingkat Kepatuhan Diet Penderita Diabetes Mellitus. Heal Tadulako J. 2022
5.   Nazriati E, Pratiwi D, Restuastuti T. Pengetahuan Pasien Diabetes Melitus Tipe 2 dan Hubungannya dengan Kepatuhan Minum Obat di Puskesmas Mandau Kabupaten Bengkalis. Maj Kedokt Andalas. 2018
6.   Irawan E. Dukungan Keluarga pada Pasien Diabetes Mellitus Tipe II di Wilayah Binaan Puskesmas Babakan Sari. J Keperawatan BSI. 2019
7.   Wardhani A. Hubungan Pengetahuan dengan Kepatuhan Diet pada Penderita Diabetes Melitus di Wilayah Kerja Puskesmas Astambul Tahun 2020. J Ilmu Kesehat Insa Sehat. 2021
8.   Dewi T, Amir A. Kepatuhan Diet Pasien DM Berdasarkan Tingkat Pengetahuan dan Dukungan Keluarga di Wilayah Puskesmas Sudiang Raya. Media Gizi Pangan. 2018