

THE RELATIONSHIP BETWEEN FAMILY SUPPORT AND SELF-MOTIVATION WITH DIETARY ADHERENCE OF PATIENTS WITH TYPE II DIABETES

Asnuddin¹, Muhammad Ardianto Rodin², Muhammad Tahir³

¹ Master of Nursing, Institut Ilmu Kesehatan STRADA Indonesia

^{2,3} ITKeS Muhammadiyah Sidrap

Email: asnuddin20@gmail.com

ABSTRACT

Diabetes Mellitus is one of the most common diseases in Indonesia with a prevalence of 19.47 million in 2021 and will increase from year to year. One of the management of DM is diet therapy. The obstacle in handling the DM diet is the patient's saturation in complying with this diet therapy. In implementing Dietary Compliance, Diabetes Mellitus sufferers need family support and self-motivation. The purpose of this study was to determine the relationship between family support and self-motivation with dietary compliance with type II DM patients in the empagae health center work area sidenreng rappang regency. This type of research is quantitative, with analytical descriptive method using a cross-sectional research design with a population of 189 people and non-probability sampling with accidental sampling technique so that a sample of 48 respondents is obtained. Data collection tools are questionnaires on family support, self-motivation and DM diet compliance. Data analysis using chi-square test. The results of the study of family support with dietary compliance showed that from the results of the Pearson chi-square test, $p\text{ value} = 0.008 < 0.05 (\alpha)$, it can be concluded that H_0 is rejected and H_a is accepted, which means that there is a significant relationship between family support and dietary compliance. Patients with type II DM in the work area of the empagae health center sidenreng rappang regency. And the results of research on self-motivation with dietary compliance show that from the result of the Pearson chi-square test, $p\text{ value} = 0.009 < 0.05 (\alpha)$, it can be concluded that H_0 is rejected and H_a is accepted, which means that there is a significant relationship between self-motivation and dietary compliance. Type II DM in the empagae health center sidenreng rappang regency. There is a relationship between family support and self-motivation with type II DM dietary compliance in the sidenreng rappang district health center.

Keywords: diabetes mellitus; dietary adherence; family support; self-motivation

BACKGROUND

Diabetes mellitus is one of the diseases that many patients suffer from. This is caused by changes in lifestyle and unhealthy eating patterns. One of the treatments to prevent complications in patients with DM is diet or dietary management (Merangin et al., 2018).

According to the *International Diabetes Federation* (IDF), the prevalence of DM worldwide will be 463 million people in 2019 (9.35%), 578 million people in 2030 (10.2%) and 700 million people in 2045 (10.9%) (Widiastuti, 2020).

The International Diabetes Federation (IDF) also estimates that in Indonesia by 2045, there will be 28.57 million people living with DM. From 19.47 million in 2021, that number

increased by 47%. Over the past ten years, the number of people with DM has continued to increase (*Number of Diabetics in Indonesia Projected to Reach 28.57 Million by 2045*, 2021). The incidence of DM in South Sulawesi was 15.79% of non-communicable diseases in 2017, second only to cardiovascular disease (CVD) (South Sulawesi Health Office, 2018).

Sidenreng Rappang district is one of the three districts with the highest prevalence in South Sulawesi, with a national prevalence of diabetes higher than the national prevalence of 2.7% with a national prevalence standard of 2.1% (Adri et al., 2020).

Based on study data at Puskesmas Empagae, there were findings of DM patients, including 134 DM patients in 2020, 162 DM patients in 2021, and 189 DM patients from January to September 2022.

Family support is necessary for a DM diet as the family is the most important factor in ensuring that the diet is followed. As a result, the family can regulate the DM diet. The best form of monitoring DM diet adherence is family. By eating a balanced diet, patients can control it (Oktavera et al., 2021).

Two elements that can influence DM diet adherence are internal and external. Internal variables include education, knowledge, beliefs, and personality that influence diet adherence. Interactions between patients, the environment, and family support are examples of external variables (Bangun et al., 2020b). Adhering to a diet is one way to prevent problems. The success of dietary adherence can be influenced by factors, including knowledge, motivation, awareness, family support, and involvement in nutrition counselling (Risti & Isnaeni, 2017).

Family support has a significant effect on dietary adherence of patients with DM. Family involvement in providing care to other families is very important if they are experiencing health problems. Therefore, family support plays an important role for people with DM to adhere to their diet (Bangun et al., 2020b).

Various studies have been conducted both inside and outside Indonesia regarding the relationship between family support and self-motivation with diet adherence of type II DM patients. However, Empagae Health Centre has not conducted a research study on the relationship between family support and self-motivation with diet adherence of type I DM patients extensively. Therefore, the relationship between family support and self-motivation with dietary adherence of patients with type II DM is an interesting topic for researchers.

METHODS

This type of research is quantitative with *descriptive analytic* method and *cross sectional* approach. conducted at Empagae Health Centre, Sidenreng Rappang Regency. Non-random sampling (non-probability) was used with accidental sampling technique. *Accidental sampling*.

RESULTS

Respondent Characteristics

The characteristics of respondents in this study are classified based on age group, and latest education. The explanation of the characteristics of the respondents is described in table1

Table 1. Distribution of Respondents Based on Gender of Patients with Type II DM in the Empagae Health Centre Working Area, Sidenreng Rappang Regency

Gender	n	%
Male	8	16,7
Women	40	83,3
Total	48	100

Source: Primary Data 2023

Based on table 1 above, it shows that of the 48 total respondents in this study, 8 were male

with a percentage of (16.7%) while 40 were female with a percentage of (83.3%).

Table 2. Distribution of Respondents Based on the Last Education of Patients with Type II DM in the Empagae Health Centre Working Area, Sidenreng Rappang Regency

Gender	n	%
HIGH SCHOOL	5	10,4
SMP	4	8,3
SD	17	35,4
Not in School	22	45,8
Total	48	100

Source: Primary Data 2023

Based on table 2 above, it shows that out of 48 respondents, the last education of SMA was 5 respondents with a percentage of (10.4%), SMP was 4 respondents with a percentage of (8.3%), SD was 17 respondents with a percentage of (35.4%), and Out of School was 22 respondents with a percentage of (45.8%).

Table 3. Relationship between Family Support and Dietary Adherence of Patients with Type II DM in Empagae Health Centre Area, Sidenreng Rappang Regency

Family Support Compliant Comp	DM Dietary				Total	%	p
			%				
	%	No					
	liant						
Good	22	45,8	2	4,2	24	50,0	0.008
Less	14	29,2	10	20,8	24	50,0	
Total	36	75.0	12	25.0	48	100	

Source: Primary Data 2023

Based on table 3, the data obtained from 48 respondents showed that those who had good family support and complied with the diet were 22 respondents with a percentage (45.8%). While those who had good family support and did not adhere to the DM diet compliance were 2 respondents with a percentage (4.2%), and those who had less family support and adhered to the DM diet were 14 respondents with a percentage (29.2%), while those who had less family support and did not adhere to the DM diet were 10 respondents with a percentage (20.8%).

From the results of the *pearson chi-square test*, the p value = 0.008 was obtained. Because $p = 0.008 < 0.05$ (α), it can be concluded that H_0 is rejected and H_a is accepted, which means that there is a significant relationship between family support and diet compliance in patients with type II DM in the Empagae Health Centre Working Area, Sidenreng Rappang Regency.

Table 4. The Relationship between Self-Motivation and Dietary Adherence of Patients with Type II DM in the Empagae Health Centre Working Area, Sidenreng Rappang Regency.

Self Motivation	DM Dietary Adherence				Total	%	p
	Compliant	%	No Compliant	%			
Good	27	56,2	4	8,3	31	64,6	0.009
Less	9	18,8	8	16,7	17	35,4	
Total	36	75,0	12	25,0	48	100	

Source: Primary Data 2023

Based on table 4 the results of the *Pearson chi-square test* obtained a p value =0.009. Because $p = 0.009 < 0.05 (\alpha)$, it can be concluded that H_0 is rejected and H_a is accepted, which means that there is a significant relationship between self-motivation and dietary compliance of patients with type II DM in the Empagae Health Centre Working Area, Sidenreng Rappang Regency.

DISCUSSION

The Relationship between Family Support and Dietary Adherence of Patients with Type II DM in the Empagae Health Centre Working Area, Sidenreng Rappang Regency

Based on table 4, it shows that those who carry out DM diet compliance are likely to occur in respondents who have good family support compared to respondents who are less.

From the results of the *pearson chi-square test*, the p value = 0.008 was obtained. Because $p=0.008 < 0.05 (\alpha)$, it can be concluded that H_0 is rejected and H_a is accepted, which means that there is a significant relationship between family support and diet adherence of type II DM patients in the Empagae Health Centre Working Area, Sidenreng Rappang Regency.

This study is in line with research conducted by (Bangun et al., 2020a) the results showed that 56.3% of respondents adhered to a diet programme. In addition, 47.9% of respondents had proper family support. Using the *chi-square test*, the results revealed that there was a significant relationship between family support and dietary adherence ($p = 0.038$; $p > \alpha$). It can be concluded that family support is an important factor in the dietary adherence of patients with DM. Therefore, involving family members is very important in providing health care and preventing complications in patients with DM.

The statistical test results showed that the p-value was 0.002, which means that there is a significant relationship between family support and dietary adherence of patients with type II DM. Suggestions for patients are expected to set a fixed amount of diet in carrying out dietary compliance. For families, it is hoped that they will better understand and participate in providing support to patients with type II DM.

The results showed that the relationship between family support and dietary compliance using SPSS *spearman* software obtained a p-value of $(0.76) > 0.05$. So it is known that there is no relationship between family support and dietary compliance in patients with DM at Babakan Sari Health Centre, Bandung City. With a percentage showing that those whose families support and are not compliant are 48.3% for those whose families support and comply as much as 43.4% while for families who do not support, respondents who are not compliant are 5% and those who do not support remain compliant as much as 8.3%.

Based on the researcher's assumption, this shows that respondents whose encouragement or support from the family is very important in the mental health of the patient. With support from the family, type II DM sufferers will feel valued, cared for so that it will make type II DM sufferers obedient to undergo or carry out a regular diet in accordance with the recommendations of doctors or health workers.

The aim is to improve the patient's diet, maintain normal blood sugar levels, prevent complications, improve health, support an optimal diet and to improve the quality of life of patients and their families. (Rochani, S. 2022) So according to the researcher, family support is one of the important factors in carrying out the diet of type II DM sufferers because if family support is lacking, type II DM sufferers will feel unappreciated and noticed by their families so that sufferers will not be motivated to carry out the diet or to improve their quality of life.

Based on the results of the study, there were 2 respondents with good family support but did not carry out DM diet compliance. According to the researcher, this is because these 2 patients are old or old so it is difficult to manage and have suffered from DM for a long time.

The Relationship between Self-Motivation and Dietary Adherence of Patients with Type II DM in the Empagae Health Centre Working Area, Sidenreng Rappang Regency

From the *pearson chi-square test* results, the p value = 0.009 was obtained. Because $p = 0.009 < 0.05$ (α), it can be concluded that H_0 is rejected and H_a is accepted. Which means that there is a significant relationship between self-motivation and dietary compliance of type II DM patients in the Empagae Health Centre Working Area, Sidenreng Rappang Regency.

This research is in line with what has been done by (Risti & Isnaeni, 2017) the test results can be seen that the percentage data of respondents with good self-motivation and obedient in running the diet is 77.8%, while respondents with poor self-motivation but still obedient in running the DM diet are 36.9%. The percentage of respondents who have good motivation but are not compliant in carrying out the DM diet is 22.2% less than respondents who have poor motivation and are not compliant in carrying out the DM diet as much as 64.0%. The results of the correlation test using *chi-square* showed the result of $p = 0.002$ ($p = < 0.05$) with $QR = 6,222$; 95% CI = 1,836-21,090). From the results of the correlation test, it states that H_0 is rejected, which means that there is a relationship between self-motivation and dietary adherence in type II DM patients.

This research is also in line with what has been done by (Anggraeni, et al 2022) from the results of this study, it is known that there is a significant relationship between self-motivation and dietary compliance of type II DM sufferers in the work area of the Bangkinang City Health Centre in 2019. The results of statistical analysis obtained a significant value of p -value = 0.000 (p -value $< \alpha$ 0.05). Based on the results of cross tabulation (*crosstabs*) shows that of the 42 respondents with high self-motivation there were 10 respondents (23.8%) who were not compliant with the diet. While out of 44 respondents with low self- motivation there were 7 respondents (15.9%) who adhered to the diet.

Based on the results of the study, there were 9 respondents who had less self-motivation but carried out DM diet compliance. Based on the results of interviews conducted by researchers, this happened because the patient was reprimanded or supervised by the family and the surrounding environment if he did not carry out DM diet compliance so that inevitably the patient had to carry out DM diet compliance.

CONCLUSION

There is a significant relationship between Family Support and Dietary Adherence of Patients with Type II DM in the Empagae Health Centre Working Area, Sidenreng Regency. Rappang, obtained a p value = 0.008 < 0.05 (α).

There is a significant relationship between Self-Motivation and Dietary Adherence of Type II DM Patients in the Empagae Health Centre Working Area, Sidenreng Rappang Regency, obtained a p value = 0.009 < 0.05 (α).

REFERENCES

- ADA. (2022). 7. Diabetes Technology: Standards of Medical Care in Diabetes—2022. *Diabetes Care*, 45, S97–S112. <https://doi.org/10.2337/dc22-S007>.
- Adelian, N., Safitri, N., Purwanti, L. E., Andayani, S., & Artikel, S. (2022). Universitas Muhammadiyah Ponorogo Health Sciences Journal Hubungan Perilaku Perawatan Kaki Dengan Kualitas Hidup Pasien Diabetes Melitus Di Rsu Muhammadiyah Dan Klinik Rulia Medika Ponorogo. <http://studentjournal.umpo.ac.id/index.php/HSJ>.
- Adri, K., Arsin, A., & Thaha, R. M. (2020). Risk Factors for Type 2 Diabetes Mellitus Cases with Diabetic Ulcers at Rsud Sidrap Regency. *Journal of Maritime Public Health*, 3(1), 101-108. <https://doi.org/10.30597/jkmm.v3i1.10298>.

- Bangun, A. V., Jatnika, G., & Herlina. (2020a). The Relationship Between Family Support and Dietary Adherence in Patients with Type 2 Diabetes Mellitus. 3(1), 66-76.
- Bangun, A. V., Jatnika, G., & Herlina, H. (2020b). The Relationship between Family Support and Dietary Adherence in Patients with Type 2 Diabetes Mellitus. *Journal of Medical-Surgical Nursing Science*, 3(1), 66. <https://doi.org/10.32584/jikmb.v3i1.368>.
- Merangin, D. I. D., Pattiselanno, F., & Mentansan, G. (2018). The Relationship of Family Support with Adherence to Diabetes Mellitus Diets. 2(2), 2016.
- Oktavera, A., Putri, L. M., & Dewi, R. (2021). The Relationship of Family Support with Dietary Adherence of Type-II Diabetes Mellitus Patients. *Real in Nursing Journal*, 4(1), 6-16.
- Risti, K. N., & Isnaeni, F. N. (2017). The Relationship of Self-Motivation and Nutritional Knowledge to DM Diet Adherence in Outpatient Type II Diabetes Mellitus Patients at Karanganyar Regional Hospital. *Health Journal*, 10(2), 94. <https://doi.org/10.23917/jurkes.v10i2.5538>.
- Rochani, S. (2022). Qualitative Study of Type 2 Diabetes Mellitus Client Adherence to the Diabetes Diet Programme. *Smart Nursing Journal*, 9 (1), 25-34.
- The number of people with diabetes in Indonesia is projected to reach 28.57 million by 2045. (2021).
- Widiastuti, L. (2020). Acupressure and Foot Gymnastics on the Level of Peripheral Arterial Disease in Type 2 DM Clients. 3(Dm), 694-706.