
**THE RELATIONSHIP BETWEEN FAMILY SUPPORT AND
MOTIVATION IN CONTROLLING BLOOD SUGAR LEVELS IN
TYPE 2 DIABETES SUFFERERS IN THE WORK AREA TAMBANG
PUBLIC HEALTH CENTER 2023****Syafriani¹, Rathi Malar², Afiah³**¹School of Health Sciences, University of Universitas Pahlawan²School of Health Sciences, University of Lincoln³School of Health Sciences, University of Universitas PahlawanEmail: syafrianifani@gmail.com, rathmilar@lincoln.edu.my, afiah.v@gmail.com**Abstract**

The high prevalence rate of type II DM sufferers every year is a major problem that needs special attention. The most common diabetes sufferers found in society are type II DM sufferers. Positive family support can increase the patient's motivation to comply with dietary patterns and control blood sugar levels. This study aims to analyze the relationship between family support and motivation in controlling blood sugar levels in type 2 diabetes sufferers in the work area of the public health center mine. This type of research is quantitative research with a cross-sectional design. The research was carried out on 13 May - 20 September 2023 with a sample size of 30 respondents, the sampling technique used was total sampling. The data collection tool used was a questionnaire, with univariate and bivariate analysis and the chi-square test. The results of the univariate analysis were obtained from 30 respondents, there were 17 respondents (56.7%) who did not have family support, and 19 respondents (63.3%) who had low motivation in controlling blood sugar levels. The results of the Chi-Square test showed that there was a relationship between family support and motivation in controlling blood sugar levels in diabetes sufferers, with a p-value = 0.000 ($p \leq 0.05$), and OR (53.3333). There is a significant relationship between relationship between family support and motivation in controlling blood sugar levels in type 2 diabetes sufferers in the work area of the public health center mine. The results of this research hope that respondents will be able to think more positively, be able to regulate their diet, carry out routine activities, take recommended medication, and routinely monitor blood sugar through support or motivation obtained from the family.

Keywords: Diabetes Mellitus, Family support, Motivation**INTRODUCTION**

Non-communicable diseases or non-infectious diseases have become part of the double burden of epidemiology in the world for the last few years. The World Health Organization (WHO) estimates that diabetes causes at least 40 million deaths every year in the world. This number is equivalent to 70% of deaths from all causes at the global level (Kemenkes RI, 2022). Diabetes is a degenerative disease that is of important concern because it is part of the four priority non-communicable diseases which always increase every year and are a threat to world health in the current era (IDF, 2021).

Data from the World Health Organization (WHO) in 2014 states that globally 422 million adults aged over 18 years suffer from diabetes. In 2019 1.5 million people died from diabetes (WHO, 2022). This death rate increased by 13% in lower-middle-income countries (WHO, 2022). International Diabetes Federation estimates (IDF, 2021) shows that 537 million or 10.5% of adults aged 20 – 79 years worldwide have diabetes. In 2030 and 2045 the number of diabetes cases is expected to increase by 46% (IDF, 2021).

Based on the results of the 2018 Basic Health Research (Basic health research), the prevalence of diabetes in DKI Jakarta and Yogyakarta is in the highest position. Almost all provinces showed an increase in the prevalence of diabetes mellitus in 2013 – 2018 except East Nusa Tenggara Province with the lowest prevalence at 0.9% followed by Maluku and Papua at 1.1%. Several provinces experienced an increase in the prevalence of 0.9%, including Riau, DKI Jakarta, Banten, Gorontalo, and West Papua (Kemenkes RI., 2020).

The prevalence of diabetes in Riau Province has increased in the last five years. In 2013 the prevalence of diabetes was 1.0% and in 2018 the prevalence of diabetes increased to 1.9% (Risikesdas, 2018). The increasing prevalence in Riau Province has resulted in Riau ranking 15th of all provinces in Indonesia (Kasumayanti et al., 2021).

Based on the 2020 Riau Province Health Service Profile, Kampar Regency is in 9th place out of 12 districts in Riau Province (Dinkes Riau, 2020). The prevalence of diabetes in Kampar Regency has increased in the last 3 years. Based on data from the Kampar District Health Service in 2020, there were 5,590 cases, increasing to 5,853 cases in 2021, and increasing again in 2022 to 11,547 cases. The incidence of diabetes in each community health center in Kampar Regency in 2022 is 11,547 people. The highest incidence of diabetes is in the UPT BLUD Work Area of the Suka Ramai Community Health Center with 1,892 people. UPT BLUD Tambang Community Health Center is in 6th place with a total of 549 cases. The previous incident in 2021 at the UPT BLUD of the Tambang Health Center was 49 people.

The family support is informational support, action assessment support, instrumental support and emotional support. where the impact of family support can reduce the emergence of stress and help control the patient's emotions. The presence of strong family support has been proven to be associated with reduced mortality, easier recovery from illness and among the elderly, cognitive function, physical and emotional health. (M. Friedman, 2010)

Research conducted by Saputra (2015) states that there is a significant relationship between family support and patient motivation to control blood sugar with Type 2 DM. Based on an initial survey by interviewing 7 patients suffering from DM in the Tambang Community Health Center Work Area on June 20 2022. 5 or (71%) people have no motivation from themselves, are lazy to go for treatment because they are busy with routine work, and do not believe in medical treatment, while 4 or (57%) people feel they do not get support from their family to control their blood sugar levels because they feel they have not there are complaints related to symptoms of DM.

Based on the things above, the author is interested in conducting further research regarding "The relationship between family support and motivation in controlling blood sugar levels in DM sufferers in the Tambang Health Center working area in 2023".

RESEARCH METHODS

This research uses a cross sectional design, namely measuring the independent variable and the dependent variable at the same time (Hidayat, 2014). The use of this design is in accordance with the researcher's aim, namely to see the relationship between family support and motivation in controlling blood sugar levels in DM sufferers in the Tambang Health Center work area in 2023. This research was carried out in the Tambang Health Center work area. This research was conducted on 21-30 August 2023. The population in this study was all sufferers of type 2 DM in the Tambang health center working area in 2023, totaling 30 people. The sample in this study were all Type 2 DM sufferers in the Tambang Community Health Center area. Data analysis was carried out using univariate analysis and bivariate analysis.

RESEARCH RESULT

The characteristics of the respondents in this research can be seen in the table as follows:

Tabel 1: Frequency Distribution of Respondents in the Tambang Health Center Work Area in 2023

No	Respondent Characteristics	Frequen cy (n)	Percentage (%)
1.	Age		
a.	36-45	9	30,0
b.	46-55	19	63,3
c.	56-65	2	6,7
2.	Gender		
a.	Laki-Laki	13	43,3
b.	Perempuan	17	56,7
3.	Education		
a.	Not completed in primary school	4	13,3
		6	20,0
b.	SD	11	36,7
c.	SMP	5	16,7
d.	SMA	4	13,3
e.	PT		
Total		30	100

Based on table 4.1, it can be seen that of the 30 respondents, there were 19 respondents (63.3%) aged 46-55 years, 17 respondents (56.7%) were female, and 11 respondents (36.7%) had junior high school education.

Univariate Analysis

Univariate analysis was carried out to describe the characteristics of each research variable. Univariate analysis in this research produces a frequency distribution of the dependent

variable, namely motivation, and the independent variable, including family support. The results of the univariate analysis obtained are as follows:

Tabel 2. Frequency Distribution of Respondents Based on Family Support with motivation in controlling blood sugar levels in DM sufferers in the Tambang Health Center working area

No	Independent Variable	Freque ncy (n)	Persent ase (%)
1.	Family support		
	a. Does not support	17	56,7
	b. Support	13	43,3
	Variabel Dependen		
2.	Motivation		
	a. low	14	46,6
	b. tall	16	53,3
	Total	30	100

Based on table 1, it can be seen that of the 30 respondents, there were 19 respondents (63.3%) aged 46-55 years, 17 respondents (56.7%) were female, and 11 respondents (36.7%) had junior high school education.

Tabel 3. Frequency Distribution of Respondents Based on Family Support with motivation to control blood sugar levels in DM sufferers in the Tambang Health Center working area.

No	Variabel Independen	Frekuensi (n)	Persentase (%)
1.	Family support		
	a. Does not support	17	56,7
	b. Support	13	43,3
	Variabel Dependen		
2.	Motivation		
	a. low	14	46,6
	b. tall	16	53,3
	Total	30	100

From table 4.2 above, it can be seen that of the 30 respondents, there were 17 respondents (56.7%) who did not have family support, 16 respondents (53.3%) had high motivation in controlling blood sugar levels in type 2 militus sufferers. This bivariate analysis describes the relationship between family support and motivation in controlling blood sugar levels in

people with type 2 diabetes mellitus in the Tambang Health Center UPT work area in 2023. This bivariate analysis uses the Chi-Square test so that it can be seen whether there is a relationship between the two variables. The researcher presents this bivariate analysis in table form below:

Tabel 4. Relationships between Family Support and Motivation in Controlling Blood Sugar Levels in Type 2 Diabetes Mellitus Sufferers in Tambang Health Center UPT Working Area 2023

Family support	Motivation		Total		P Value	POR (95% CI)
	<u>Rendah</u> %	<u>Tinggi</u> n %	N	%		
Does not support	6	20	11	36,6	17	100
support	8	26,6	5	16,6	13	100
Total	14	46,6	16	53,3	30	100

Based on the results of the analysis, it was obtained that POR (Odd Ratio) = 53.333, meaning that respondents whose family support was not supportive had a risk of 53.333 times lower motivation in controlling blood sugar levels compared to respondents whose family support was supportive in controlling blood sugar levels.

Bivariate Analysis

This bivariate analysis describes the relationship between family support and motivation in controlling blood sugar levels in sufferers of type 2 diabetes mellitus in the work area of the Tambang health center in 2023. This bivariate analysis uses the Chi-Square test so that it can be seen whether there is a relationship between the two variables. The researcher presents this bivariate analysis in table form below:

Tabel 5. The Relationship between Family Support and Motivation in Controlling Blood Sugar Levels in Type 2 Diabetes Mellitus Sufferers in the London Work Area of the Riau Community Health Center in 2023

Family support	Motivasi		Total		P Value	POR (95% CI)
	<u>Rendah</u> %	<u>Tinggi</u> n %	N	%		
						53.333

Tidak Mendukung	20	11	36,6	17	100	0,000	(4.852-586.212)
Mendukung	26,6	5	16,6	13	100		
Total	46,6	16	53,3	30	100		

Based on the results of the analysis, it was obtained that POR (Odd Ratio) = 53.333, meaning that respondents whose family support was not supportive had a risk of 53.333 times lower motivation in controlling blood sugar levels compared to respondents whose family support was supportive in controlling blood sugar levels.

Based on table 4.4, it can be seen that of the 17 respondents whose family support was in the unsupportive category, there were 11 respondents (36.6%) with high motivation, while of the 13 respondents whose family support was in the supportive category, there were 8 respondents (26.6%) with high motivation. Based on statistical tests using the chi square test, the p value = 0.000 ($p \leq 0.05$), with a degree of significance ($\alpha = 0.05$). This means that there is a relationship between family support and motivation in controlling blood sugar levels in Type 2 DM sufferers in the Tambang Community Health Center working area in 2023. Based on the results of the analysis, POR (Odd Ratio) = 53.333 means that respondents with unsupportive family support have a risk of 53.333 times lower motivation in control blood sugar levels compared to respondents whose family support supports controlling blood sugar levels

DISCUSSION

The Relationship between Family Support and Motivation in Controlling Blood Sugar Levels in Type 2 Diabetes Mellitus Sufferers Based on the research results, based on statistical tests using the chi square test, the p value = 0.000 ($p \leq 0.05$), with a degree of significance ($\alpha = 0.05$). This means that there is a relationship between family support and motivation in controlling blood sugar levels in people with type 2 diabetes mellitus in the Tambang Health Center UPT work area in 2023. It is known that from 30 respondents, 17 people had family support who did not support them, there were 11 people who were high in motivation to control levels. blood sugar, while 13 people did not support family support, there were 8 people who were low in motivation to control blood pressure.

Family support is a strong indicator that can have a positive impact on self-care in patients with diabetes. Positive family support can increase, including patient motivation in complying with diet patterns and controlling blood sugar levels. Family support is a very important role to grow the family to have effective functions, care functions, functionalization, reproductive functions, economic functions. Family is two or more people who are united by togetherness and emotional closeness and identify themselves as part of the family. It is also defined as a group that lives together with or without blood relations, marriage, adoption and is not only limited to membership in the household (M. Friedman, 2010).

Family support is informational support, action assessment support, instrumental support and emotional support, where the impact of family support can suppress the emergence of stress and help the patient master emotions. The existence of strong family support has been proven to be associated with reduced mortality, easier recovery from illness and among the elderly, cognitive function, physical and emotional health (M. Friedman, 2010). This research is in line with (Saputra & Sutanta2, 2015) which states that there is a significant relationship between family support and patient motivation to control Type 2 DM blood sugar.

Motivation is one of the factors supporting behavior change for the better. The impact of patients with high motivation will have a higher level of commitment in controlling blood sugar levels, while patients with low motivation will also have a low level of commitment in controlling blood sugar levels (Arimbi et al, 2020). The level of adherence to treatment is influenced by motivation (Given, 2002 dalam Tombokan 2019) .

Successful management of diabetes mellitus is also required by the active role or motivation of DM sufferers themselves, their families and communities in controlling blood sugar levels, preventing acute and chronic complications (Asdie, 2000 in Ali, 2019). This research is in line with research conducted by Tombokan et al., (2019) which states that there is a significant relationship between family support and motivation in controlling blood sugar levels in diabetes mellitus sufferers.

This research is in line with research conducted by Tombokan et al (2017) regarding the relationship between family support and motivation in controlling blood sugar levels in diabetes mellitus sufferers in the Pampang Health Center Working Area, Panakkukang District, Makassar City. States that there is a significant relationship between family support and motivation in controlling blood sugar levels in diabetes mellitus sufferers. Based on the results of statistical tests using risk, a p-value of 0.01 ($p < 0.05$) was obtained. There is a significant relationship between family support and motivation in controlling blood sugar levels in diabetes mellitus sufferers in the Pampang Community Health Center working area, Panakkukang District, Makassar City. This research is also in line with that conducted by (Andoko et al., 2020) regarding the relationship between knowledge and motivation to prevent complications in diabetes mellitus sufferers. States that there is a relationship between knowledge and motivation of DM sufferers in preventing complications with $p\text{-value} = 0.029$, meaning it is smaller than the alpha value ($0.029 < 0.05$). Thus, it can be concluded statistically with a confidence level of 95%, it is believed that there is a relationship between knowledge and motivation of DM sufferers in preventing complications at the Bhayangkara Regional Police Hospital in Lampung in 2018.

CONCLUSIONS AND SUGGESTIONS

There is a significant relationship between the relationship between family support and motivation in controlling blood sugar levels in type 2 diabetes sufferers in the work area of the public health center mine. The results of this research hope that respondents will be able to think more positively, be able to regulate their diet, carry out routine activities, take

recommended medication and routinely monitor blood sugar through support or motivation obtained from the family.

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