

The Social Influence Of Family Support And Long Suffering On Self Management In Type 2 Diabetes Mellitus (DM) Patients At Gotong Royong Hospital Surabaya: Cross Sectional Study

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ABSTRACT

Introduction. Lack of awareness of type 2 DM patients and the duration of suffering are factors that inhibit type 2 DM sufferers from carrying out self-management properly. The purpose of this study was to determine the effect of family support and long suffering with self-management in patients with Diabetes mellitus (DM) type 2. **Methods.** The study design used cross sectional. The population is patients with type 2 diabetes mellitus. The total sample was 167 respondents, taken according to inclusion and exclusion criteria. The sampling technique used is purposive sampling. The independent variables are family support and long suffering. The dependent variable is self-management. Data was collected using questionnaires that have been tested for validity and reliability using product moments. The data were analyzed using spearman rho analysis. **Results.** The results showed that there was an association of family support for self-management ($p = 0.000$) and no association of long suffering with self-management diet ($p = 0.879$). **Discussion.** High family support can make people with type 2 DM have good self-management. long suffering from DM does not necessarily make DM sufferers have good self-management. As long as people with type 2 DM have the awareness to carry out self-management well, complications can be prevented. For health workers, it is expected to further optimize health education and counseling in increasing spiritual intelligence in carrying out self-management of type 2 DM.

Keywords: Social Support Family, long suffering, self-management, Diabetes Mellitus (DM)

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INTRODUCTION

Diabetes Mellitus is one of the degenerative diseases, which is a disease caused by the function or structure of the body's tissues or organs that progressively decrease over time from age or lifestyle choices (Nuraisyah, 2018). Family support is a supporting factor for the success of something that can change a person's situation such as in patients who have DM, in DM patients who do not get family support will affect self-management as well as DM patients who experience stress will affect self-management, therefore family support and stress levels with self-management should accompany each other to create a condition that will improve the condition that experienced by patients with type 2 DM (C.Nurhayatiet al., 2022)

The International Diabetes Federation (IDF) estimates that in 2019 there are at least 463 million people aged 20-79 years in the world suffering from diabetes or equivalent to a prevalence rate of 9.3%

of the total population at the same age. Meanwhile, Indonesia is the only country in Southeast Asia and is ranked 7th out of the top 10 countries with the most diabetics, which is around 10.7 million sufferers. Based on these figures, it can be concluded that Indonesia has a large contribution in the prevalence of diabetes mellitus cases in Southeast Asia (Shafitri Paris et al., 2023)

The goal of self-management in general is to improve the quality of life of people with diabetes mellitus in the short and long term. Short-term self-management is shown to eliminate complaints and signs of diabetes, while long-term is shown to reduce complications.6 Therefore, proper treatment of diabetics is carried out 5 pillars of self-management including education, medical nutrition therapy, physical exercise, pharmacological therapy, blood sugar monitoring (Salsabilla et al., 2023)

Self-management also affects the length of time a person suffers from the disease where the long duration of diabetes generally has an adequate understanding of the importance of self-management so that it is used as a basis for them to seek the widest possible information about diabetes care through various means through the media and other information sources (Bai et al, 2009). Melda's research (2019) shows the characteristics of respondents based on the length of suffering from DM with high self-management, which is 1-5 years. The length of time the patient suffers from DM affects the ability to self-manage. Respondents who have suffered from DM for a long time will be very aware of the disease and the benefits of self-management behavior itself (Meliana et al., 2022)

METHODS

The research design used in this study was a non-experimental design of Cross sectional type (Nursalam, 2017) cross sectional is a type of study that emphasizes the measurement time or observance of independent and dependent variable data only once at a time, so there is no follow-up. Of course, not all research subjects must be observed on the same day or at the same time, but both independent and dependent variables are assessed only once. With this study, the prevalence or effect of a phenomenon (independent variable) will be obtained associated with the cause (dependent variable). This study used the cross sectional type because it aimed to determine the social influence of family support and long suffering on self-management in type 2 DM patients at Gotong Royong Hospital Surabaya.

RESULTS

The results of the study are as follows:

Table 1. Distribution of respondents based on age, gender, education, status, occupation at Gotong Royong Hospital

Category	Demographics	
	n	%
Age Group		
36-45 yrs	14	8,4
46-55 yrs	55	32,9
56-65 yrs	98	58,7
Gender		
Man	69	41,3
Woman	98	58,7
Education		
Primary Education	77	46,1
Secondary Education	79	47,3
PT	11	6,6
Status		
Marry	151	90,4
Divorced/Widowed/Widower	16	9,6
Work		
IRT/Not working	76	45,5
Teacher	3	1,8
Crafts (nursing assistant)	1	0,6
Merchant		
Laborer	36	21,6
ART	23	13,8

Security	7	4,2
Driver	3	1,8
	6	3,6

Based on table 1 shows that most of the respondents were female with a total of 98 respondents or 58.7%, most of them had a high school education or secondary education with a total of 79 respondents or 47.3%, the age range of respondents was entirely at the age of 56-65 years with a total of 98 respondents or 58.7%, then the majority of type 2 DM sufferers were married with a total of 151 respondents or 90.4%, and the majority as housewives (IRT) with 59 respondents or 35.3%.

Table 2. Fasting blood sugar check and 2JPP at Gotong Royong Hospital Surabaya

Fasting Blood Sugar	n	%
Normal (<126 mg/dl)	85	50,9
Abnormal (>126 mg/dl)	82	49,1
Blood Sugar 2JPP		
Normal (<200 mg/dl)	92	55,1
Abnormal (>200 mg/dl)	75	44,9
Total	167	100

From table 2 Most respondents have normal fasting blood sugar (GDP) and 2JPP values, according to Perkeni (2015) normal fasting blood sugar values are < 126 mg / dl, and 2JPP is < 200 mg / dl.

Table 3. The effect of family support on self-management of type 2 DM patients

Family Support	Self Management			Total
	Good	Enough	Less	
Good	3(100%)	0%	0%	3(100%)
Keep	66(72.2%)	23(19.4%)	6(7.9%)	95(100%)
Bad	21(47.1%)	22(35.5%)	26(17.6)	69(100%)
Sum	90(65,1%)	45(23,9%)	32(11%)	167(100%)

Spearman Rho p statistical test value 0.05 r value = 0.412

Table 3 shows that of the 167 respondents, the majority of 66 (72.2%) have moderate family support and good self-management. Respondents who had moderate Family Support support with *self-management* were 23 respondents (19.4%) and respondents who had poor family support with *self-management* were less than 26 respondents (17.6%). The results of the *spearman rho* test showed a correlation value of 0.412 with p 0.05, thus there was a significant relationship between family support and self-management in type 2 DM patients.

Table 4. Distribution of Self Management for Type 2 DM Patients

Category	Self Management	
	N	%
Diet		
Less	7	4,2
Enough	40	24,0
Good	120	71,9
Physical exercise		
Less	32	19,2
Enough	87	52,1
Good	48	28,7
OAD Treatment		
Less	3	1,8
Enough	6	3,6
Good	158	94
Blood sugar monitoring		
Less	166	99,4
Enough	1	0,6
Foot Care		
Less	65	38,9

Enough	35	21,0
Good	67	40,1

Table 4 shows that most respondents were good in diet with 120 people by 71.9%, treatment with 158 people by 94%, and foot care with 67 people by 40.1%. Most respondents were sufficient in physical exercise as many as 87 people or 52.1%, and less in monitoring blood sugar as many as 166 people or 99.4%.

Table 5. Analysis of the Effect of Family Support on *Self Management* in patients with type 2 DM

Family Support	Self Management						Total	
	Less		Enough		Good		n	%
	N	%	N	%	n	%		
Low	4	50	3	37,5	1	12,5	8	100
Keep	17	40,5	20	47,6	5	11,9	42	100
Tall	30	25,6	30	25,6	57	48,7	117	100
Total	51	30,5	53	31,7	63	37,7	167	100

Spearman Rho p = 0.000 r= 0.301

Based on table 5 above, it can be seen that the results of statistical tests of *self-management variables* on family support variables show a value of p = 0.000. The value is said to be meaningful (significant) because the p value < 0.05 which means that the hypothesis is accepted. This explains that there is a significant relationship between spiritual intelligence and *self-management* of people with type 2 diabetes. The result of the *Spearman Rho correlation coefficient value* of 0.301 shows that the direction of the correlation is positive (unidirectional) with the value of the correlation coefficient in the weak category.

Table 6. Analysis of the Effect of Long Suffering on *Self Management* in patients with type 2 DM

Long Suffering	Self Management						Total	
	Less		Enough		Good		N	%
	N	%	N	%	N	%		
Short	22	31,0	26	36,6	23	32,4	71	100
Keep	13	26,5	14	28,6	22	44,9	49	100
Long	16	34,0	13	27,7	18	38,3	47	100
Total	51	30,5	53	31	63	37,7	167	100

Spearman Rho p = 0.879 r= 0.21

Based on table 6 above, it can be seen that the results of the analysis of the influence between *the self-management* variable and the old variable suffered showed a value of p = 0.879. The value is said to be meaningless (insignificant) because the p value > 0.05 which means that the hypothesis is rejected. This explains that there is no significant relationship between long suffering and *self-management* of people with type 2 diabetes.

DISCUSSION

Based on the results of the study above, it can be explained that the higher the family support received by type 2 diabetes mellitus patients, the higher the self-management behavior. This shows the importance of the role of family support in influencing respondents' ability to cope effectively with their illness. So that the greater the support provided by family members, the better the ability of respondents to carry out self-management of type 2 diabetes mellitus. The fact that this association is significant and strong indicates that support from family members can play a decisive role in the successful management of type 2 diabetes mellitus (R Nurhayati et al., 2020)

According to the researcher's opinion, in line with previous research by Sartika (2022) with the results that there is a relationship between family support and self-management in diabetes mellitus patients, elderly people with diabetes mellitus with good family support have 4 times better self-management than self-management with poor family support. The results of Saraswati's study (2022), stated that there is a relationship between family support and self-management of type 2 diabetes mellitus patients with p-value = 0.001. This happens because the success of type 2 diabetes mellitus patients in self-management cannot be separated from family support. Also supported by further

research with the results of family support received by people with diabetes mellitus associated with optimal diabetes self-management (p -value < 0.001). (Damayanti et al., 2023)

According to research conducted by De Oliveira D, et al. (2021) shows a significant relationship between self-care behavior and blood sugar control in newly diagnosed type 2 diabetes patients. In addition, a significant association was also found between self-care behavior and cardiovascular risk in these patients. This study shows the importance of self-care behavior in managing type 2 diabetes mellitus, especially in newly diagnosed patients. Through a good selfcare approach, patients can improve blood sugar control and reduce the risk of cardiovascular complications in the future. Therefore, the role of health workers to provide education and support to patients to improve selfcare behavior is very important.

According to the report, there is a significant relationship between p-value knowledge 0.025, family support p-value 0.005 and self-efficacy p-value 0.014 with self-management of diabetes mellitus type-2 ($p < 0.05$). The conclusion obtained is that good self-management is supported by knowledge, family support and good self-efficacy. (Meliana et al., 2022)

According to the report, there is a relationship between family support ($p = 0.000 < 0.05$) with self-care in type 2 DM patients at the Depok III Sleman Health Center Yogyakarta. Good family support has adequate self-care (86.4%). Adequate diabetes self-care as many as 54 respondents (67.5%). The importance of village support in improving diabetes self-care so as to get optimal results. (Java, 2018)

According to the mention that there is a relationship between family support and improving Self Care Management of Type 2 DM patients at the Tamalanrea Health Center in Makassar City. For this reason, Family Support in improving self-care management is very important because if family support is good, it will improve self-care management of DM patients. Therefore, families are expected to participate in providing support to sick family members. According to the mention that there is a relationship between family support and the implementation of self-care for diabetes mellitus patients at the Tamamaung Health Center in Makassar City ($\rho = 0.003$). Families are expected to continue to provide support both in patient self-care and psychologically. (Munir, 2021)

From the results of the study, it can be concluded that long-term DM patients will increasingly show a decreased level of adherence, meaning that patients have less or poor self-management. This is contrary to the results of this study, it was found that patients who had a long duration or long suffering had good, sufficient, and less self-management. There are long-term diabetes mellitus sufferers, namely > 10 years have good self-management. It can be interpreted that different durations or lengths of DM do not determine self-management in DM patients. This is reinforced by the results of questionnaires from diabetics who have a long duration of suffering differently, DM patients with short duration have good self-management, and enough, always obey the doctor's recommendations for a healthy life. In line with patients suffering from long-term DM also have good and sufficient self-management because they live a healthy lifestyle as recommended by the doctor. However, there are also patients with long duration, short and long suffering, there are also those who have less self-management.

This suggests there are other factors that have a stronger relationship between long suffering and self-management of patients with type 2 diabetes mellitus. It can be due to factors from respondents with type 2 DM who are less serious in carrying out and complying with self-management, causing self-management to only be a concept owned by type 2 DM respondents without any concrete action. Judging from the results of the questionnaire, the old sufferers of short, medium, and long both have good self-management.

CONCLUSION

1. Family support has an influence on the self-management of people with Type 2 DM. People with Type 2 DM with good family support have good self-management.
2. Long suffering from Type 2 DM has no relationship with self-management of Type 2 DM sufferers. Patients with long or long suffering both have good self-management.

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