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The Correlation of Families Role and the Quality of Life (QOL) of Diabetes Mellitus Patients

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Abstract

Diabetes Mellitus is a disease that not only requires treatment but also lifestyle changes, so that often patients tend to despair with a long therapy program that will have an impact on the quality of life of patients. This study aimed to determine the correlation of family roles and the quality of life (QOL) of patients with Diabetes Mellitus. The design of this study was cross sectional analytic type. The population was all patients with diabetes mellitus and family on May-July 2018 at Dr Wahidin Sudiro Husodo General Hospital in Mojokerto as many as 96 people. The sample was 57 respondents taken by purposive sampling. The independent variable was family roles. The dependent variable was the quality of life. The instrument used a questionnaire of family roles and the quality of life. The data analysis used the Spearman statistical test. The results showed that 32 respondents (56.7%) or almost half of the respondents had enough family roles, almost all of the respondents or 38 respondents (66.7%) had a high quality of life of, and the results of p α= 0.05 was 0.046 <0.05. There was a correlation between the role of family and the quality of life of patient with diabetes mellitus. The role of a good family can improve the quality of life of patients with Diabetes Mellitus. The better the role of the family, the higher the level of quality of life of the sufferer. Therefore the family can play a role in improving the quality of life Diabetes Mellitus sufferers.

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INTRODUCTION

Diabetes Mellitus (DM) or diabetes is a metabolic disorder characterized by hyperkalemia associated with abnormalities in carbohydrate, fat and protein metabolism. Metabolic abnormalities caused by decreased insulin sensitivity or both and cause chronic microvascular, macrovascular and neuropathic complications (Kowalak, 2011). Diabetes Mellitus (DM) is one of the health problems that have an impact on productivity and can reduce the quality of human resources, DM does not only require treatment but also lifestyle changes so that patients often tend to be discouraged by therapy programs. One way to improve the quality of life of DM patients through the role of the family, because the role of the family can motivate sufferers to live optimistically so that it can improve the quality of life (Fatmaningrum, 2011). Baiyewu, O., Yussuf, A. D., & Issa, B. A. (2007) of 251 respondents, aimed to assess the quality of life of DM patients and to compare clinical and sociodemographic factors that could affect the quality of life of patients. The results showed that there were 52 patients (20.7) with a low quality of life score.

Prevalence of diabetes mellitus in the world from year to year has increased. The prevalence of diabetes mellitus is growing rapidly throughout the world. Estimates of diabetes mellitus to date reach 285 million worldwide and begin to increase to 438 million in 2030 **(**Omar M.L and San K.L, 2014**)**.World Health Organization (WHO, 2015) estimates that globally, 422 million adults over the age of 18 are living with Diabetes Mellitus in 2014. This is also supported by data from the International Diabetes Federation (IDF) stating that there are 382 million people (175 million are estimated to be undiagnosed) in the world suffering from DM in 2013, this number is expected to increase to 592 million people in 2035 (Riskesdas, 2013). The increase in this disease will mostly occur in developing countries, caused by population growth, aging, unhealthy diet, obesity and a sedentary lifestyle.

Indonesia is one of the developing countries in the world. The population of Indonesia over the next 25 years continues to increase, from 238.5 million in 2010 to 305.6 million in 2035. Data from the Basic Health Research on Riskesdas states that the incidence of Diabetes Mellitus in Indonesia in 2007 increased by 1.1% to 2.1% in 2013 (Riskesdas, 2013). In addition, epidemiologically it is estimated that in 2030 the prevalence of DM reaches 21.3 million people in Indonesia. The increase in the prevalence of diabetes mellitus in Indonesia has a negative impact on the quality of life of human resources (PERKENI, 2015).

Based on the results of a preliminary study at RSU Dr. Wahidin Sudiro Husodo obtained medical record data on 30 December 2017 from January to December 2017, there were 6395 patients with diabetes mellitus in internal medicine. Of the 10 DM patients who visited the internal medicine clinic, data was obtained that many DM patients who suffered from diabetes mellitus were more than 6 months old. Based on interviews with patients about quality of life, as many as 6 patients said their daily activities were disrupted after suffering from diabetes mellitus, because some patients suffered injuries to the soles of the feet, and some complained of decreased vision.

Complications experienced by sufferers vary in psychology, social, economic. Complications of physical forms that can cause damage to vision function, kidney function, cardiovascular function, sexual function, stroke and even gangrene (Barnes, L., Moss-Morris, R., & Kaufusi, M, 2009). This complication can cause disorders caused by lifelong diseases. Murdiningsih dan Ghofur (2013) in his study showed a strong link between the level of anxiety about the level of blood donor ability that would improve quality of life. DM patients will discuss the difficulties that arise and discuss the strict and difficult diet. Decreasing work productivity with the contribution of perwatan or disease becomes a special burden for sufferers. This condition continues throughout his life which will reduce the quality of life for people with DM.

Handling Diabetes Mellitus includes education, nutritional therapy / diet, exercise and medicine (Nuraini & Ledy, 2016). Treatment of DM requires a long time because DM is a chronic disease that will suffer for life, and is very complex because it not only requires treatment but also lifestyle changes so that patients often tend to be discouraged with a therapy program. Such conditions can affect the functional, physical, psychological and social health capacity and well-being of people with diabetes mellitus (Fatmaningrum, 2011).

One of the therapeutic targets for diabetes mellitus is improving the quality of life. In this case, quality of life should be an important concern for

health professionals because it can be a reference to the success of an action / intervention or therapy. This diabetes mellitus will accompany a patient's lifetime so that it greatly affects the quality of one's life. If not handled properly can cause complications in organs such as eyes, heart, blood vessels, and nerves that will endanger lives and affect the quality of one's life. Low quality of life can worsen complications and end disability or death.

The family is very instrumental in improving the quality of life in patients with diabetes by regulating the psychological process and facilitating behavioral change (Setiadi, 2008). Diabetes Mellitus will accompany for life so that it can affect the patient's quality of life. Quality of life is an individual's perception of his position in the context of culture and the value system in which the individual lives and has a relationship with his goals, hopes, standards and focus of life (WHO, 2015).

One of the factors that influence the quality of life of diabetic patients is the role of the family. Therefore, it is necessary to have adequate family support to increase mortality and accelerate the healing process of people with diabetes mellitus. The purpose of this study was to determine whether there is a positive relationship between the role of the family with quality of life (QOL) in patients with diabetes mellitus in Dr Wahidin Sudiro Husodo General Hospital, Mojokerto City.

METHODS

The research design used a correlational analytic study design with a cross sectional approach. Population in this study were all diabetes mellitus patients and families in Dr Wahidin Sudiro Husodo General Hospital, Mojokerto on May-July 2018. Sampling technique used purposive sampling. Sample size was 57 respondents. The variables in this study divided role of the family (independent variable) and quality of life (dependent variable). Instrument for collecting data used questioner by WHO-QOL. Analyze data used Spearman Rho test.

RESULT

The following will be presented the results of the study of the relationship of family roles with quality of life (QOL) in patients with diabetes mellitus in Dr Wahidin Sudiro Husodo General Hospital, Mojokerto.

Tabel 1 Characteristic responden

Characteristics	f	%
Age		
<31 years old	4	7
31-40 years	13	22.85
41-50 years	15	26.3
> 50 years	25	43.85
Marital status		
Single	1	1.75
Married	51	89.5
Widow/ widower	5	8.75
Complicated		
Heart	6	10.5
Visual impairment	17	29.8
Kidney and integument	14	24.5
Nocompacated	20	35.2
Long suffered		
1-5 years	24	42.5
6-10 years	23	40
> 10 years	10	17.5

Based on Table 1, the most were aged> 50 years, married, suffering from heart disease and long illness between 1-5 years.

Table 2 The role of the family in Dr Wahidin Sudiro Husodo General Hospital, Mojokerto 2018

No	Family Role (criteria & score)	f	%
1.	Less (1 - 14)	0	0
2.	Enough (15 - 28)	32	56.1
3.	Good (29 - 42)	15	26.3
4.	Very Good (43 - 56)	10	17.5
	Total	**57**	**100**

Based on Table 2 shows that the role of the family most is a enough role that is equal 56.7%

Table 3 Quality of life (QOL) patients diabetes mellitus in Dr Wahidin Sudiro Husodo General Hospital Mojokerto 2018

Quality of life (criteria & score)	f	%
Height (201 - 400)	38	66,7
Low (0 - 200)	19	33,3
Total	**57**	**100**

Based on Table 3 shows that quality of life most is a height quality that is equal 66.7%

Table 4 Relationship between the role of family and quality of life (QOL) in diabetics mellitus at Dr Wahidin Sudiro Husodo General Hospital, Mojokerto 2018

Family Role	*Quality of life*				f	%
	Height		Low			
	f	%	f	%		
Less	17	30,0	15	26,7	32	56,7
Good	11	20,0	4	6,7	15	26,7
Very Good	10	16,6	0	0	10	16,6
Total	**38**	**66,6**	**19**	**33,4**	**57**	**100**
Spearman test p = 0.046						

Based on Table 4 shows less family of role related to lowquality of lifeon diabetes mellitus patient. Results of spearman test p = 0.046 and p<0.05. There was a relationship between the role of family and quality of life in patient with diabetes mellitus.

Table 5 Crosstab Characteristik and quality of life (QOL) in diabetics mellitus at Dr Wahidin Sudiro Husodo General Hospital, Mojokerto 2018

Characteristic	*QoL*				f	%
	Hight		Low			
	f	%	f	%		
<31 years old	3	5,2	1	1,5	4	6.7
31-40 years	6	10,5	7	12,8	13	23.3
41-50 years	10	17,7	5	9	15	26.7
> 50 years	19	32,8	6	10,5	25	43.3
Single	1	1,5	0	0	1	1,5
Married	34	59,6	17	30,2	51	89,8
Widow widower	3	6,1	2	2,6	5	8,7
Complication Heart	5	9	1	1,5	6	10,5
Visual impairment	12	21	5	9	17	30
Kidney and integument	8	14	6	10,5	14	24,5
No complicated	13	23,3	7	12,9	20	35
Long surfered 1-5 years	9	16,7	5	0	14	24,6
6-10 years	15	26,3	8	14	23	40,4
> 10 years	14	24,5	6	10,5	20	35

Based on table 5 shows that high Family role at the age more 50 years old, married status, did not experience complications and the duration of illness DM between 6-10 years

Based on Table 6, it shows that the lowest QoL is more than 50 years old, married status, vision problems and the duration of DM is more than 10 years

Table 6 Crosstab Characteristik and QoL role in diabetics mellitus at Dr Wahidin Sudiro Husodo General Hospital, Mojokerto 2018

Characteristic	Family Role						Freq %
	Very good		Good		Enough		
	F	%	F	%	F	%	
<31 years old	2	5,2	2	1,5	0	4	6.7
31-40 years	2	10,5	3	12,8	8	13	23.3
41-50 years	3	17,7	6	9	6	15	26.7
> 50 years	3	32,8	4	10,5	18	25	43.3
Single	1	1,5	0	0	0	1	1,5
Married	6	59,6	14	30,2	31	51	89,8
Widow widower	3	6,1	1	2,6	1	5	8,7
Complication Heart	2	9	2	1,5	2	6	10,5
Visual impairment	2	21	3	9	6	17	30
Kidney and integument	3	14	3	10,5	8	14	24,5
No complicated	3	23,3	7	12,9	10	20	35
Long surfered 1-5 years	3	16,7	6	0	5	14	24,6
6-10 years	5	26,3	7	14	11	23	40,4
> 10 years	2	24,5	3	10,5	15	20	35

DISCUSSION

The role of the family

Based on Table 1, it was found that most respondents had enough family roles and a small proportion of respondents had a very good family role, namely 10 respondents. Based on table 5 shows that high Family role at the age more 50 years old, married status, did not experience complications and the duration of illness DM between 6-10 years.

The role of the family describes a set of interpersonal behaviors, traits, activities related to individuals in certain positions and situations. The role of individuals in the family is based on expectations and patterns of behavior from family, groups, and society (Jitender N. A., 2010).

The family as a driver of behavior or support towards a goal based on the need for a sick family member desperately needs support from the family (Dedik, 2011).

In addition, families are expected to always prepare themselves to bring sick family members to facilitate DM sufferers faced by patients by providing nutrients that the patient likes but in accordance with the patient's diet. The family has the main role in maintaining the health of all family members and not the individual itself to achieve the desired level of health (Friedman, 2002).

In this study shows that the active role of families in providing motivation, education, and facilitators for people with Diabetes Mellitus is very important, the role of the family is needed in life and health both physically and the level of stress of the sufferer of the disease he is suffering at this time. In this study also obtained from the three family role factors namely motivation, education and facilitators, factors that have more active roles, namely motivation and facilitators.

Based on the results of the study respondents who have a good family role as many as 15 respondents, who have a very good family role as many as 10 respondents. The role of a high family in most DM patients is at the age of more than 50 years. At this age enter the elderly who have high dependency. Because families always provide support and attention to respondents to always be routine in doing treatment, the family is also willing to accompany respondents in undergoing treatment. The results of the next study showed that the family's role was 32 respondents. Because the family does not pay attention to the condition of the respondent during the illness so that the family in performing care and treatment for the respondent is not optimal.

Quality of life (QOL)

Based on the results in Table 2 it was found that most respondents had a high quality of life. Based on table 6, it shows that the lowest QoL is more than 50 years old, married status, vision

problems and the duration of DM is more than 10 years.

Quality of life is a condition when a person can maximize physical, psychological, work and social functions. Quality of life is an important indicator of recovery or adjustment of a chronic disease (Masfufah, 2014). Many factors influence the quality of life in patients with diabetes. Patients with DM with young diabetic ulcers will have a better quality of life because usually their physical condition is better than older people. Old age will have an increased risk of developing DM and glucose intolerance due to general degenerative factors, namely decreased body function to metabolize glucose (Wicaksono, 2011). Based on the results of the study, the duration of 6-10 years diabetes had a high quality of life (26.3%). In accordance with the research of Setiyorini & Wulandari (2017) which shows that suffering from type 2 diabetes more than 5 years has a good quality of life of 25%. This can be caused by the longer a person has diabetes, the more opportunities to learn based on experience. Patients are increasingly experienced in dealing with diabetes and have good coping. The level of education is also one of the factors that can affect the quality of subjective life, the quality of life will increase along with the higher level of education obtained by individuals. Thus, low education will result in low quality of life for type II DM patients. Education is an important factor in understanding disease, self-care, DM management and blood sugar control, overcoming symptoms that arise with proper handling and preventing complications. So that the quality of life of type II DM patients is maintained optimally. Education in this case is related to knowledge. In addition, patients with high education can develop coping mechanisms and a good understanding of information. Thus, the individual will respond positively and will take actions that are beneficial to him (Ningtyas, 2013).

The results of this study indicate that age, level of education can affect the level of quality of life of patients, so that the younger patients and the higher the level of education, the higher the quality of life because people who are younger and have a higher education they will know about the importance of health, so the components quality of life such as physical, psychological and even social functions will certainly be well maintained.

Relation of the role of the family to quality of life (QOL) diabetes mellitus patient

In Table 3, it is obtained data that 11 respondents who have a good family role have a high quality of life and a small proportion of respondents have a low quality of life (26.7%). Respondents who have a good family role as many as 11 respondents have a high quality of life and 4 respondents have a low quality of life (6.7%). This is because the respondents have been discouraged by the therapy program provided by the doctor, in addition the respondent also often violates the diet given by the doctor even though he has been reminded by the respondent's family to continue to violate it and not listen to the advice of his family. The results of statistical tests using Spearman show that P value (0.046) <á (0.05) so that it can be concluded that there is a relationship between the role of family and quality of life.

Roles that influence the quality of life according to Dedik (2011) are motivators in which the family as a driver of behavior or support towards a goal based on the existence of a need for sick family members in desperate need of support from the family, educators that in this case can be interpreted as family efforts in providing education to sick family members. For this reason, families can be an effective source of family knowledge about health, especially how the family plays a role in the implementation of the DM diet. And the last is the facilitator who functions as a means needed by the sick family to fulfill the need to achieve the program's planning success. Therefore, it is expected that families always prepare themselves to bring sick family members to facilitate DM sufferers who are faced with sufferers' diets. The family has the main role in maintaining the health of the whole family and not the individual itself to achieve the desired level of health (Friedman, 2002).

Living with DM will have a negative influence on the quality of life of patients who are accompanied by complications. Ningtyas (2013) showed that there were effects of complications on the quality of life of patients with type II diabetes in RSUD Bangil Pasuruan Hospital. In table 6 shows the data that most people with DM experience complications which is equal to 65%. Based on table 5, the majority of the family's role is less, which is equal to 56.3% and the quality of life of DM patients shows that their quality of life is lacking.

The results of this study indicate that the role of the family influences Quality of Life or quality of life because in the role of the family there are 3 factors that can improve 4 domains of quality of life such as physical, psychological, social and environmental health but from the four domains that are the most dominant, namely social because Diabetes Mellitus sufferers need the role of the family to improve their quality of life by supporting the family and paying attention, help and affection from the family will make the respondent have a positive view of themselves and their environment. Young diabetics will have a better quality of life because usually their physical condition is better than the older ones even though the family role is not too high. Therefore we need factors that can improve the domain of quality of life, namely motivation, educators and facilitators are applied in everyday life, apart from these 3 factors, young age and higher education that is owned by sufferers makes it easier for families to provide motivation, facilitating and explaining the DM disease itself is easily digested by sufferers.

The results of this study indicate that the role of the family can affect the quality of life in DM patients. The results of this study are in accordance with the results of a study by Sutikno (2011) which states that there is a close relationship between the function of the Role of Families with Elderly Quality of Life for Diabetes Mellitus. On the results of the study showed a value of P (0.046) < α (0.05) so it can be concluded that there is a relationship between family roles and quality of life. Families need to optimally apply their roles and functions in providing education and supporting positive activities of DM patients so that patients can live happily so that their quality of life will increase

CONCLUSION AND SUGGESTION

CONCLUSION

Based on the results of research and statistical analysis, it can be concluded that there is a relationship between family role and quality of life (QOL) in people with diabetes mellitus at the Dr. Wahidin Sudiro Husodo Central General Hospital, Mojokerto. With a good family role can improve the quality of life for people with Diabetes Mellitus.

SUGGESTION

Families have to carry out a good role in improving the quality of life for people with DM. Health workers to facilitate families to maximize the role to improve the quality of life for people with DM by providing assistance to families.

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