

Family Support Related to Quality of Life in Diabetes Mellitus Patients with Ulcer

Christina Yuliasuti¹, Nur Muji Astuti^{1*}, Didik Dwi Winarno¹, Mei Ayu Sari¹, Norin John²

¹Sekolah Tinggi Ilmu Kesehatan Hang Tuah Surabaya, Jawa Timur 60244, Indonesia

²Lincoln University College, 47301 Petaling Jaya, Malaysia

*Corresponding Author's Email: nurmujiastuti@stikeshangtuah-sby.ac.id

ABSTRACT

Background: Some issues which might be frequently discovered in patients with diabetes mellitus who revel in a slowing of ulcer restoration are long treatment, large treatment expenses, decreased productiveness, and family support, which have an essential effect on the affected person's quality of life (QOL). The objective of the observation was to identify the relationship between family support and quality of life in diabetes mellitus (DM) patients with ulcers. **Methods:** An observational study was used in this study, involving 47 randomly selected patients with type 2 diabetes mellitus aged 40–80 years who have foot ulcers and have no diabetic ketoacidosis or nonketotic hyperosmolar complications. Collecting data using Hensarling's Diabetes Family Support Scale and the DQOL questionnaire A Spearman rank test with a significance level of p 0.05 was used to analyze the data. **Results:** Diabetes mellitus patients with ulcers had appropriate family support, especially on the dimensions of informational support, even as their excellent lifestyles turned quite proper. This examination showed that family support relates to the quality of life ($p = 0.048$). **Conclusion:** Excellent family support will enhance self-care management compliance so that the quality of life of DM patients will increase. Assistance and empowerment of the role of the family in caring for DM patients can maximize family support for patients.

Keywords: *Diabetes Mellitus; Family Support; Quality of Life; Ulcer*

INTRODUCTION

Changes in lifestyle, especially in big cities, have led to an increase in the prevalence of degenerative illnesses such as coronary heart disease, diabetes mellitus type II, weight problems, and high blood pressure. Diabetes mellitus is not only increasing continuously every year among urban communities but has spread to rural communities. This is due to the increasing level of the economy, so that a healthy lifestyle is not paid attention to, ignorance or indifference to maintaining a healthy diet (Nuraisyah, Kusnanto & Rahayujati, 2017). Patients with type 2 diabetes are associated with high complications and poor QOL (D'Souza, Venkatesaperumal & Walden, 2018). Problems that are often found in diabetes mellitus patients with diabetic ulcers are the condition of diabetic ulcers that have not completely healed due to long treatment, large treatment costs, decreased productivity, and family support, which have an important effect on QOL patients (Basri, 2019). In this

case, family support plays an important role in mental health in diabetic patients; in this case, quality of life (Nuraisyah, Kusnanto & Rahayujati, 2017).

Based on the Ministry of health's research, the proportion of diabetes mellitus occurrence in Indonesia in 2013 became 1.5% to 2.0% in 2018. The percentage of DM prevalence in Indonesia in 2013 was 1.5% to 2.0% in 2018. A documentary study conducted in 2020 at the Kebonsari Public Health Center Surabaya found a population of diabetes mellitus patients in 2019 with as many as 250 patients, and the last 3 months of November 2019 to January 2020 with as many as 53 patients with ulcers. DM is a chronic disorder. This is complicated and requires on-going hospital treatment. Approximately 75% of people with diabetes mellitus die because of vascular complications. Different complications which could occur due to diabetes mellitus are coronary heart disorder, stroke, kidney failure, amputation due to diabetes mellitus sores, and even loss of life (Wahyuni & Ramayani, 2020). Patients

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who maintain a high rate of medication compliance have a significantly reduced rate of hospitalization, thus reducing the cost of healthcare (Al-Amedy, Yoong & Ahmed Saido, 2018). Good support from their family will increase the patient's enthusiasm for undergoing the treatment (Muliani *et al.*, 2021). Family empowerment will have an effect on family support (Luthfa & Ardian, 2019). It is necessary for patients and their families to understand this so that the QOL of patients is maintained.

Objective

To identify the relationship of family support with QOL in DM patients with ulcers

METHODOLOGY

An analytic observational method with a cross-sectional approach was used in the study. The study was conducted at Kebonsari Surabaya Community Health Centre. A sample of 47 diabetes mellitus patients was considered, using a simple random sampling technique with inclusion criteria. Patients with type 2 diabetes mellitus DM with complications of diabetic ulcer, aged 40–65 years old, can communicate well. The research instrument used a questionnaire using Hensarling's Diabetes Family Support Scale and a Diabetes Quality of Life questionnaire.

RESULTS

This study was conducted on 47 patients with diabetes mellitus with ulcers at Kebonsari Surabaya Community Health Centre. The average respondent is male (57.4%), with an average age of 51–60 years (49%), a high school education (44,7%), and most of them are married (97.9%). They are mostly control in health services (66%), blood sugar average 171-250 mg/dl, and have been taking diabetes medication for 1-5 years, and on average have signs of infection in the wound (55.3%).

Table 1: The Characteristics of Respondents

Characteristics of Respondents	Freq (f)	(%)	
Sex	Male	27	57.4 %
	Female	20	42.6 %
Age	41 – 50 years	10	21.3 %
	51 – 60 years	23	49 %
	61 – 70 years	12	25.5 %
	71 - < 78 years	2	4.2 %
Last educational background	Have no education	5	10.6 %
	Elementary School	11	23.4 %
	Junior High School	7	14.9 %
	Senior High School	21	44.7 %
	College/university	2	4.3 %
	Others	1	2.1 %

Occupation	Homemakers/Unemployed	23	48.9 %
	Civil servant	6	12.8 %
	Private employed	8	17.0 %
	Self-employed	4	8.5 %
	Others	6	12.8 %
Role in family	As mother	20	42.6 %
	As father	26	55.3 %
	Others	1	2.1 %
Marital status	Married	46	97.9 %
	Not married	1	2.1 %
Check regularly at health care facilities	Yes	31	66.0 %
	No	16	34.0 %
Blood glucose level	85 – 170 mg/dl	19	40.4 %
	171 – 250 mg/dl	23	49 %
	< 312 mg/dl	5	10.6 %
Duration of taking medication	1 – 5 years	32	68.1 %
	6 – 10 years	15	31.9 %
Infection sign	Yes	26	55.3 %
	No sign	21	44.7 %

Source: Primary Data

Table 2: Family Support and QOL of Patients with DM with Ulcers

Family support	Quality of life						P-value
	Moderate		Good		Total		
	F	%	F	%	F	%	
Poor	10	62.5%	6	37.5 %	16	100%	0.048
Moderate	6	75.0%	2	25.0 %	8	100%	
Good	11	43.5%	13	56.5%	23	100%	
Total	26	55.3	21	44.7	47	100	

Source: Primary Data

DISCUSSION

Family support is help supplied by other family participants who will offer physical and mental comfort for human beings experiencing disturbing conditions. This family support occurs over the life span with variations at each stage of the family life cycle. The support provided will be able to improve adaptation in family health. This study found that the average family support for DM patients was good, especially on the informational dimension, where the family was advised to take control of the hospital/health service. This is evidenced by the majority of DM patients routinely check in health care facilities because they are also active in the DM group. According to Bao, (2021) showed that a high perception of family support had a significant contribution to the patient's health. The mental resilience of patients with diabetes strategies can help control the blood sugar levels and significantly improve the self-management behavior, physical and mental health of patients. The issue of this study is that

family support on the reward dimension has the lowest score, namely when the family provides food that is taboo for the patient. According to Nuraisyah, Kusananto, & Rahayujati, (2017), appraisal support / appreciation is also a form of family affective function that can improve psychosocial status in sick families. Through this support, patients will receive recognition for their abilities and expertise. According to researchers, the support given through families to type 2 DM patients can enhance psychosocial status, enthusiasm, motivation, and growth because they are considered useful and meaningful for families so as to form regular DM management practices, which leads to an enhanced quality of life. The results of this study are consistent with previous studies which stated the importance of family variables (marriage, family coping, partner support, and family stress) on adherence to self-care and medication behaviour (Kurnia, 2022). Researchers believe that family support given to DM patients, both emotional, instrumental, and informational support, will increase good behaviour in carrying out Diabetes Self-Management (DSM) so that control and QOL of patients can be optimal. Family is a group that has a very important role in our lives. Individuals will have an optimal quality of life if family functions can run properly. Feelings of comfort and protection in DM sufferers will rise due to emotional support and instrumental appreciation from their own family. This situation will prevent stress and decrease anxiety in type 2 DM patients (Amelia, Wahyuni & Felicia, 2018), Diabetes complications are strongly related to the QOL of DM patients (Ferawati & Sulisty, 2020). The results showed that family support was associated with the QOL of patients with DM with diabetic ulcers ($p=0.000$, $r = 0.290$). families have power over attitudes and getting to know the needs of people with DM through refusing or offering support, both physically, psychologically, emotionally, and socially. Families who provide support and participate in health education about diabetes mellitus will have an impact on the more positive attitude of DM patients towards learning about DM. Conversely, DM patients will have a negative attitude if there is a rejection of the patient and without the support of the family during treatment. A negative attitude towards the disease and treatment will result in the failure of therapeutic DM management. However, this condition can affect the patient's QOL and social abilities (Soegondo, 2006; Rahmawati, Idriansari & Muharyani, 2018). Patients with diabetes mellitus require metabolic

problems that will affect the patient's lifestyle, including insulin therapy and oral antidiabetic drugs, diet, blood sugar measurement, and physical exercise. This can be achieved with the participation or involvement of the family. There is an experience of difficulties for the patient and family, and possible complications. A negative impact on their QOL will occur when the patient adapts to all the changes that will occur. This study found that family support is related to the QOL of DM patients with foot ulcers ($p=0.048$). This finding adds to the evidence from several previous studies. QOL of DM patient has a significantly correlation with their families. The patients who had a better role in the family had a higher QOL (Saudah, Yuniarti & Wulandari, 2019). Previous research on 40 DM patients found that only about 40% of families provide assistance to DM patients in carrying out diabetes exercises (Aristawati & Puspitasari, 2020). Other studies also state that a leg exercise programme can improve the ankle-brachial index of DM patients (Bakara & Kurniyati, 2021). However, it will require the family as a support system so that DM patients can run the program. Family support will increase the patient's self-efficacy. The higher the self-efficacy, the better the self-care for patients with type 2 DM (ability to regulate blood sugar levels, diet, physical activity, medication, foot care) (Wahyuni & Ramayani, 2020). The result is also in line with other research on family-based programs, including family-oriented self-management programmes that can improve self-management, self-efficacy, quality of life, and knowledge about diabetes in the intervention group (Wichit *et al.*, 2017). Family support is very needed for patients with type 2 DM to increase their belief in being able to perform the correct treatment of diabetes mellitus. It will increase the motivation to carry out the treatment of diabetes (Damanik, Lubis & Mutiara, 2019). There was an association between marital status and the knowledge level of diabetes in the elderly (Kamaru, Mohd & Hussein, 2018). One of the important aspects of the management of DM treatment is family support. Compliance in self-care management is carried out properly and regularly so that patients do not feel too burdened by diabetes but feel enthusiastic about carrying out daily activities. This will result in a good QOL for DM patients (Nuraisyah, Kusananto & Rahayujati, 2017).

CONCLUSION

Excellent family support will help human beings with diabetes mellitus to develop self-belief, attention,

and self-motivation within the capability to perform self-care so that the QOL of humans with diabetes will increase. Assistance and empowerment of the role of the family in caring for DM patients can maximize family support. Further research is needed to explore self-efficacy and patient compliance in diabetes self-management.

Ethical Approval

This current research had received ethic approval from the Health Research Ethics Committee of Sekolah Tinggi Ilmu Kesehatan Hang Tuah Surabaya, Indonesia, with a Certificate of Ethical Eligibility Number:

PE/36.a/VI/2020/KEPK/SHT, dated 12th June, 2020.

Conflict of Interests

The authors declare that they have no conflict of interest.

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