

The Effect of Lifestyle, Spiritual, and Family Support on Diabetic Mellitus Patient with Chronic Kidney Disease Complication

Anwar Rosyadi, Indri Hapsari*, Pri Iswati Utami

Magister Ilmu Farmasi, Fakultas Farmasi, Universitas Muhammadiyah Purwokerto,
Jl. KH. Ahmad Dahlan, Dukuhwaluh, Banyumas, Jawa Tengah 53182, Indonesia

*Corresponding author email: indrihapsari_ump10@yahoo.com

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ABSTRACT

Patients with Diabetes Mellitus (DM) with complications of chronic kidney disease (CKD) have decreased quality of life (QOL). Some factors that can affect QOL are lifestyle, spirituality, and family support. The purpose of this study was to determine the effect of lifestyle, spirituality, and family support on the QOL of DM patients with CKD complications at Siaga Medika Purbalingga Hospital. Respondents from this study were all patients diagnosed with DM with CKD complications and had a history of treatment in August 2019-September 2020 period. A total of 48 respondents then filled out a questionnaire that had been tested for validity and reliability. The results of this study are respondents have a good quality of life as much as 62.5%, and the remaining 32.5% are not good. Patients who have a better lifestyle and spiritual level have 11 times the chance of having a better QOL. Meanwhile, patients who have better family support have a 0.13 times better chance of their QOL. In conclusion, there is a significant impact between lifestyle, spirituality, and family support with QOL. Hospitals are urgently needed in providing counseling about the importance of lifestyle, spirituality level and family support so that the patient's QOL increases.

Keywords: DM with complications CKD, family support, lifestyle, quality of life, spirituality.

Introduction

The number of patients with Diabetes Mellitus (DM) is still a lot. DM disease that is not handled properly can cause other complications. One of the diseases that arise due to DM is Chronic Kidney Disease (CKD) (Budianto, 2017). The risk of CKD can be obtained from either type 1 or type 2 DM (Rivandi &

Yonata, 2015). The government is continuously trying to suppress the increasing incidence of DM. One of the long-term government programs in tackling DM is to improve the quality of life of patients. Patients with diabetes mellitus complicated by CKD tend to experience a decreased quality of life.

Several factors that can affect the quality of life include lifestyle, spirituality, and family support. Patients who adopt a good lifestyle are known to have the potential to have a 3.8 times higher quality of life (Ritonga et al., 2021). In addition to lifestyle factors, internal factors are also very important. Especially the spiritual factor. Spirituality concerns the psychological condition of the patient himself. The higher the spirituality it will affect a person's point of view in dealing with problems in his life so that the quality of life will increase (Munawarah et al., 2018). Good family support can reduce the patient's level of anxiety in undergoing therapy for the disease experienced by the patient. Good family support can also reduce the obstacles that may be obtained by patients in carrying out treatment. Elderly patients, reduced ability to do activities and think can get good help due to good family support as well. So that patients who receive good family support will have a better quality of life (Meidikayanti & Wahyuni, 2017).

Until now, there are still a lot of patients diagnosed with DM at the Siaga Medika Purbalingga General Hospital. Likewise, DM patients who have complications with CKD. If it is not treated properly, the patient's condition can deteriorate and the goals of therapy are not achieved. Based on this explanation, it is necessary to conduct further research which aims to determine the level of quality of life in DM patients with CKD complications at Siaga Medika Purbalingga General

Hospital and to find out how much influence these factors have on the quality of life.

Research Method

General

Based on the problems and objectives to be achieved in this study, the research method used is quantitative. The type of research used is non-experimental research with a retrospective research design where the researcher selects/takes a sample in one year back. The time of the study was carried out from September 2020 to June 2021. The study was carried out at the Siaga Medika Purbalingga General Hospital. In this study, the sampling method used was a non-probability sampling method and the selection of samples taken was determined by the purposive sampling technique where the determination of the sample used was patients who received a doctor's diagnosis of DM with CKD at Siaga Medika Purbalingga Hospital in the period August 2019 to September 2020.

Instruments

In collecting data for this study, the instruments used were the WHOQOL-BREF questionnaire sheet as a tool to measure the quality of life and a questionnaire sheet of the factors that affect the quality of life as a measuring tool for these factors.

Procedures

In the implementation stage of data collection, researchers took

quantitative data by providing a WHOQOL-BREF quality of life questionnaire, an instrument for assessing the quality of life factors, and collecting comorbid data through medical records. Although previous research shows valid results, according to researchers, validity testing must still be carried out. This is because in previous studies the subjects of the study were patients with CKD who underwent hemodialysis treatment. In this study, the subjects taken were DM patients with complications of CKD, both subjects with hemodialysis treatment and those without. The reliability test is done by comparing the r table with r results to get the Alpha value. If r Alpha is greater than r table (r 0.60), then the question is said to be reliable. Although previous studies have shown reliable results, according to researchers, reliability testing must still be carried out.

Furthermore, the data obtained is then carried out by processing data analysis. Data analysis was carried out in several stages, including editing, coding, entering data (data entry) or processing, and data cleaning or cleaning. The data that has been processed is then carried out with univariate, bivariate, and multivariate data analysis processes

Results and Discussion

This chapter presents and explains the analysis of factors that influence the quality of life of DM patients with CKD at Siaga Medika Hospital Purbalingga. The bivariate

analysis, it is explained the influence between the dependent variable and the independent variable, namely the influence between the quality of life and lifestyle, spirituality, and family support. In the multivariate analysis, the dominant factors influencing the quality of life of DM patients with CKD were explained. The total number of samples in this study was 48 respondents who met the inclusion criteria, with a description of the results of the study as follows.

Demographic Characteristics

Based on the Table 1, it shows that there are more female respondents, namely 29 people (60.4%), while the remaining 19 people (39.6%) are male. In line with several studies, it is stated that the number of DM patients with female gender is more than male (Ritonga et al., 2021; Susanti & Bistara, 2018; Hartanto & Mulyani, 2017). Similarly, gender in patients with CKD where the number of female patients is more than male (Andriati & Aisyah, 2021; Tartum et al., 2016).

Characteristics of respondents based on patient age stated that respondents with age under 60 years were 27 people (56.5%) more than respondents with age above 60 years were 21 people (43.5%). This is in line with previous research that the number of DM patients with an age range below 60 years is more than patients aged over 60 years (Susanti & Bistara, 2018; Hestiana, 2017). Likewise in patients suffering from CKD where the number of

patients aged under 60 years is more than over 60 years (Andriati & Aisyah, 2021).

Based on the level of education of respondents who graduated from high school, the number of respondents who did not graduate from high school was 24 people (50%). Respondents who are no longer working as many as 37 people (77.1%) while respondents who are still working until now are fewer in number,

name as many as 11 people (22.1%). Based on the marital status of the respondents, most of the respondents were married, namely, 41 people (85.4), while respondents who were not married, widowed, or widowed were 7 (14.6). For the income of the respondents themselves, as many as 40 people (83.3) have incomes below 1 million while 8 other people (16.7) have incomes above 1 million.

Table 1. Demographic characteristics of respondents with DM with CKD

Characteristics of respondents	Total	
	f	%
Gender		
Men	19	39.6
Ladies	29	60.4
Age		
<60 years	27	56.5
>60 years	21	43.5
Education		
Pass high school	24	50
Did'n pass high school	24	50
Religion		
Islam	48	100
Ethnic group		
Jawa	48	100
Profession		
Work	11	22.9
Did not work	37	77.1
Marriage status		
Married	41	85.4
Not married/ widow/ widower	7	14.6
Income		
<1 millions of Rupiah	40	83.3
>1 millions of Rupiah	8	16.7
Long DM		
<3 years	7	14.6
>3 years	41	85.4
Long GGK		
<3 years	6	12.5
>3 years	42	87.5
Financer		
BPJS	48	100

The length of time respondents experienced DM and CKD varied. Respondents who experienced DM more than 3 years were 41 people (85.4%), while those who had DM less than 3 years were 7 people (14.6%). Likewise, 42 respondents (87.5%), while those less than 3 years old were 6 (12.5%). While the demographic characteristics of respondents based on religion, ethnicity and cost are all the same, namely being Muslim, Javanese, and using BPJS financing.

Based on the distribution of respondents according to the quality of life above, there are 30 patients with a good quality of life (62.5%), while 18 people with a poor quality of life (37.5%).

Table 2. Distribution of Respondents by Quality of Life of DM Patients with CKD

Quality of life (Category)	Total (n)	Percentage (%)
Good	30	62,5
Not Good	18	37,5
Total	48	100

This study found the data in Figure 1, where the number of respondents who have a good lifestyle is more than respondents who have a fairly good lifestyle.

Data on the distribution of respondents based on their lifestyle, as many as 36 people (75%) live a good lifestyle, while 12 people (25%) have a fairly good lifestyle. The results of this study are in line with previous studies where the number of patients who have

a good lifestyle is 47% while patients who have a fairly good lifestyle are 13% and 10% are not good (Alfiani et al., 2017). However, this study is not in line with other studies where the number of respondents who have a bad lifestyle is 52% while those who have a good lifestyle are 48% (Ritonga et al., 2021).

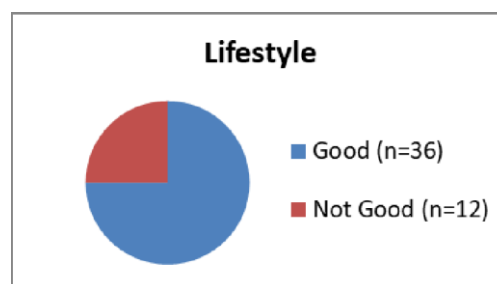


Figure 1. Distribution of respondents based on lifestyle

In this study, the data in Figure 2 shows that the number of respondents who experience a good spiritual level is more than respondents who experience a poor spirituality level.

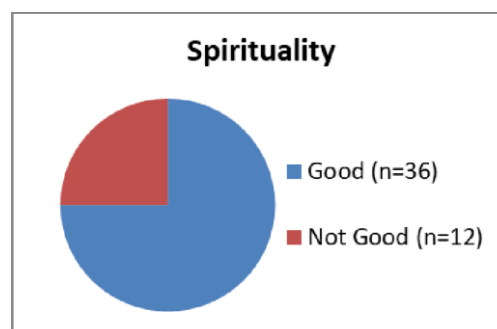


Figure 2. Distribution of respondents based on spirituality

The distribution of respondents based on spirituality stated that as many as 36 people (75%) were good in terms

of spirituality, while as many as 12 people (25%) were quite good in spirituality. The results of this study are in line with previous studies where respondents with a diagnosis of CKD have a good spiritual level of 71%, and quite good at 29% (Khikmah, 2019).

This study found the data in Figure 3, where the number of respondents who have good family support is more than respondents who have poor family support. Based on Figure 3, it is known that the number of respondents who received family support with high status was 33 people (68.8%), while respondents who received family support with moderate status were 15 people (31.3%), and there were no respondents who have a low status of family support.

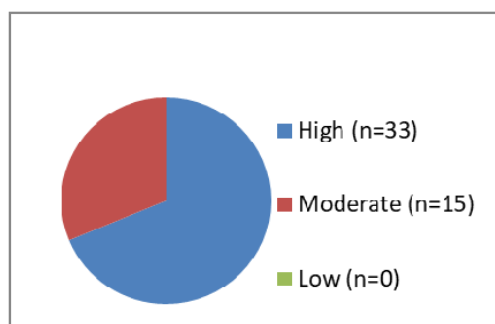


Figure 3. Distribution of respondents based on family support factors

Based on the Figure 3, it is known that the number of respondents who received family support with high status was 33 people (68.8%), while respondents who received family support with moderate status were 15 people (31.3%), and there were no

respondents who had moderate status. low family support. This illustrates that most of the respondents' families have given care and a form of affection and are rated positively by the respondents. The family is the closest people to the respondent who supports the patient's treatment starting from instrumental, informational, emotional and reward support. The results of this study are supported by previous studies where the number of DM patients who received good family support was more than those who did not receive family support (Suwanti et al., 2021). In addition, previous studies also explained that family support for CKD patients was mostly good, namely as much as 84.3% (Manalu, 2020).

The distribution of respondents between variables is described in Table 2. The bivariate analysis explains the influence between the dependent variable and the independent variable, namely the influence between the quality of life and lifestyle, spirituality, and family support.

Effect of Lifestyle with Quality of Life

The number of respondents who have a good lifestyle with a good quality of life is also 26 people (54.2%), and as many as 10 people (20.8%) have a poor quality of life. Respondents who have a poor lifestyle and have a good quality of life are 4 people (8.3%) while the rest have a poor quality of life as many as 8 people (16.7%). Based on the results of statistical tests obtained p-value = 0.016, it is concluded that there is an influence

between lifestyle and quality of life on respondents.

From the results of the analysis, the value of OR = 0.163, means that respondents who have a better lifestyle have a 5.2 times chance of having a better quality of life. This study is in line with previous research where statistical results state that $p = 0.044$, which means that there is an influence between lifestyle and quality. Respondents who have a good lifestyle have a better quality of life 3.8 times (Ritonga et al., 2021). The results of this study are supported by previous research on DM respondents where there is a significant influence between spirituality factors and quality of life (Katadi et al., 2019). However, the research conducted on CKD respondents showed statistical results that there was no significant effect between spirituality and quality of life (Khikmah, 2019).

Effect of Family Support on Quality of Life

The number of respondents who received family support with high status and with a good quality of life was 17 people (35.4%), and as many as 16 people (33.3%) had a poor quality of life. Respondents who have moderate status family support but have a good quality of life are 13 people (27.1%) while the rest have a poor quality of life as many as 2 people (4.2%). Based on the results of statistical tests obtained $p\text{-value} = 0.020$, it is concluded that there is an influence between Family Support and Quality of Life on respondents. From the results of

the analysis, the value of OR = 0.163, meaning that respondents who have better family support have a 0.163 chance of having a better quality of life. Similar to previous studies that the family support given to DM patients has a significant effect on the quality of life, the higher the family support, the higher the quality of life of the respondents (Angraini et al., 2021). Likewise with research conducted on CKD respondents that there is a significant influence between family support and quality of life (Sagiyo, 2020).

Thus, according to the researcher's analysis, family support is a very important factor in improving the quality of life. The support, encouragement, and motivation provided by the family are very meaningful to the respondents. Considering the needs of respondents who need help from other people, starting from delivering for treatment to facilitating all the needs needed by respondents in treatment is very important.

After the independent variables were analyzed by simple logistic regression bivariate with the dependent variable and it was found that the $p\text{-value} < 0.25$, the variable then entered the multivariate stage. The results of the candidate selection can be explained in Table 3.

The results of the bivariate analysis with logistic regression obtained $p\text{-value}$ of family support ($p = 0.020$), lifestyle ($p = 0.016$), and spirituality ($p = 0.016$) meaning that some of these

independent variables have a p-value smaller than 0.25 ($p < 0.25$) so that all of them can be included in the multivariate modelling.

The value of the Odd Ratio is Lifestyle (OR = 10,808), meaning that respondents who have a better Lifestyle have 11 times the chance of having a better quality of life. The spirituality

factor has an Odd Ratio value of 10.808, which means that respondents who have a good spirituality level have 11 times the chance of having a better quality of life. Likewise with the family support factor has an Odd Ratio value of 0.133 which means that respondents who have good family support have a 0.13 times better chance of quality of life.

Table 3. Distribution of respondents by dependent variable: quality of life and independent variables: lifestyle, spirituality, and family support

Variable		Quality of life				p value	OR (Lower-upper)
		Good		Not good			
		n	%	n	%		
Lifestyle	Good	26	54.2	10	20.8	0.016*	5.200 (1.277-21.181)
	Not Good	4	8.3	8	16.7		
Spirituality	Good	26	54.2	10	20.8	0.016*	5.200 (1.277-21.181)
	Not Good	4	8.3	8	16.7		
Family Support	High	17	35.4	16	33.3	0.020*	0.163 (0.32-0.841)
	Moderate	13	27.1	2	4.2		

Table 4. The results of multivariate modeling with a full model of factors that influence the quality of life of respondents with a diagnosis of DM with CKD at Siaga Medika Hospital Purbalingga

Variabel	B	Wald	P value	OR	95% CI	
					Lower	Upper
Lifestyle	2.380	6.835	0.009*	10.808	1.815	64.372
Spirituality	2.380	6.835	0.009*	10.808	1.815	64.372
Family Support	-2.014	2.033	0.033*	0.133	0.021	0.849

Conclusion

The quality of life of DM patients with CKD complications was 62.5% classified as good, and the remaining 32.5% were not good. Patients who have a better lifestyle have 11 times the chance of a higher quality of life, patients who have a better spiritual level have 11 times the chance of a better quality of life, and patients who have

better family support have a 0.13 times better chance of quality his life.

Reference

Alfiani, N., Yulifah, R., Sutriningsih, A. 2017. Hubungan pengetahuan diabetes mellitus dengan gaya hidup pasien diabetes mellitus di Rumah Sakit Tingkat II dr. Soepraoen Malang. *Nurs News (Meriden)*, 2(2):390–402.

- Andriati, R., Aisyah, A. 2021. Analisis determinan kepatuhan menjalani hemodialisa dengan kualitas hidup pasien gagal ginjal kronik. *Edu Masda Journal*, 5(1):1-8.
- Angraini, S.S., Apriyeni, E., Jesica, F. 2021. Hubungan dukungan keluarga dengan kualitas hidup pasien diabetes mellitus tipe 2. *Prosiding Seminar Nasional Stikes Syedza Saintika*, 1(1):257–263.
- Budianto, Y. 2017. Hubungan diabetes mellitus dengan kejadian gagal ginjal kronik di ruang hemodialisa RSUD Dr. H. Ibnu Sutowo Baturaja Kabupaten Ogan Komering Ulu. *Cendekia Medika: Jurnal Stikes Al-Ma'arif Baturaja* 2:88–93.
- Hartanto, D., Mulyani, R. 2017. Korelasi kepatuhan terapi berbasis insulin dengan efektivitas terapi pada pasien diabetes melitus tipe 2 di RSUD Ulin Banjarmasin. *Jurnal Ilmiah Ibnu Sina*, 2(2):287–295.
- Hestiana, D.W. 2017. Faktor-faktor yang berhubungan dengan kepatuhan dalam pengelolaan diet pada pasien rawat jalan diabetes mellitus tipe 2 di Kota Semarang. *Journal of Health Education*, 2(2):138–145.
- Katadi, S., Andayani, T.M., Endarti, D. 2019. Hubungan kepatuhan pengobatan dengan outcome klinik dan kualitas hidup pasien diabetes melitus tipe 2. *Jurnal Manajemen dan Pelayanan Farmasi*, 9(1):19-26.
- Khikmah, L.Z. 2019. Hubungan spiritualitas dan religiusitas dengan kualitas hidup pasien gagal ginjal kronik yang menjalani hemodialisa di RS PKU Muhammadiyah Gamping. *J Heal Stud*, 1:120.
- Manalu, N.V. 2020. Dukungan keluarga terhadap kualitas hidup pasien gagal ginjal kronik yang menjalani terapi di RS Advent Bandar Lampung. *Jurnal Health Sains*, 1(3):126-132.
- Meidikayanti, W., Wahyuni, C.U. 2017. Hubungan dukungan keluarga dengan kualitas hidup diabetes melitus tipe 2 di Puskesmas Pademawu. *Jurnal Berkala Epidemiologi*, 5(2):240–252.
- Munawarah, S., Rahmawati, D., Setiawan, H. 2018. Spiritualitas dengan kualitas hidup lansia. *Nerspedia*, 1(1):64–9.
- Ritonga, S.H., Julianda, D.P., Antoni, A. 2021. Hubungan gaya hidup dengan kualitas hidup pada penderita masalah kaki diabetik. *Jurnal Keperawatan Priority*, 4(1):1–8.
- Rivandi, J., Yonata, A. 2015. Hubungan diabetes melitus dengan kejadian gagal ginjal kronik. *Medical Journal of Lampung University*, 4(9):27–34.
- Sagiyo, S. 2020. Hubungan dukungan keluarga dengan kualitas hidup pasien gagal ginjal terminal yang menjalani terapi hemodialisis di RS PKU Muhammadiyah

- Yogyakarta. *Skripsi*. Yogyakarta: Universitas Aisyiah Yogyakarta.
- Susanti, S., Bistara, D.N. 2018. Hubungan pola makan dengan kadar gula darah pada penderita diabetes mellitus. *Jurnal Kesehatan Vokasional*, 3(1):29-34.
- Suwanti, E., Andarmoyo, S., Purwanti, L.E. 2021. Hubungan dukungan keluarga dengan kualitas hidup pasien diabetes melitus tipe 2. *Health Sciences Journal*, 5(1):70-88.
- Tartum, V.V.A., Kaunang, T.M.D., Elim, C., Ekawardani, N. 2016. Hubungan lamanya hemodialisis dengan tingkat depresi pada pasangan hidup pasien gagal ginjal kronik di RSUP Prof. Dr. R. D. Kandou Manado. *e-Clinic*, 4(1):46-52.