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Overview Quality of Life Diabetes Mellitus of Tipe II Patients

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ABSTRACT

Diabetes mellitus (DM) is a global health threat, both in Indonesia and globally. Nearly half a billion people live with diabetes. DM patients experience elevated blood sugar levels (hyperglycemia) caused by abnormalities in insulin secretion, insulin action, or both. The purpose of this study was to determine the quality of life in patients with Type II Diabetes Mellitus. A quantitative descriptive method was used with 70 respondents with diabetes mellitus selected by accidental sampling. The research instrument used was the DQOOL questionnaire. Data collection was conducted in August 2024. The results of the study from 70 respondents showed that the most dominant respondents were type II DM patients with a good quality of life of 38 people (54.3%), and a poor quality of life of 32 people (45.7%). The conclusion of this study is that the majority Diabetes Mellitus of Type 2 Patients at Abdul Moeloek Hospital are elderly people with hypertension. These findings are expected to motivate Type 2 Diabetes Mellitus patients to improve their quality of life.

INTRODUCTION

Diabetes mellitus (DM) is currently a global health threat, with nearly half a billion people living with the disease. DM sufferers experience elevated blood sugar levels (hyperglycemia) caused by abnormalities in insulin secretion, insulin action, or even both (Sudirman & Modjo, 2023). Diabetes Mellitus is a leading cause of morbidity and mortality worldwide due to its high symptom burden and long-term complications. Diabetes mellitus has two types: type 1 and type 2 (Izgu et al., 2019). Patients with poor glycemic control are at high risk of developing complications, including coronary heart disease, retinopathy, nephropathy, and peripheral neuropathy (Izgu et al., 2019).

Diabetes mellitus of type 2 is the highest prevalence of type diabetes. This is caused by various factors, including environmental and hereditary factors. Environmental factors are caused by urbanization, which has shifted people's lifestyles from consuming healthy and nutritious foods from nature to consuming fast food. Fast food can lead to obesity, which puts someone at risk of type 2 diabetes. People with obesity have a four-fold greater risk of developing type 2 diabetes than people with normal nutritional status (Asnaniar & Safruddin, 2019).

The International Diabetes Federation (2019) explains that the number of diabetes patients worldwide increased to 463 million in 2019, with 4.2 million deaths. Indonesia ranks seventh with 10.7 million diabetes patients. The prevalence of diabetes is estimated to increase with age, reaching 111.2 million people, or 19.9%, in the 65-79 age range. The increase will continue to occur until 2030, increasing to 578 million people and in 2045 as many as 700 million (IDF, 2019; (Tubalawony & Parinussa, 2023). Based on Basic Health Research (Riskesdas, 2018) An increase occurred in the prevalence of DM where the age of ≥ 15 years in Indonesia in 2013 was 1.5% to 2.0% in 2018. Lampung Province ranks 27th out of 34 provinces in Indonesia. The number of sufferers of type 2 Diabetes Mellitus in Indonesia is ± 12,191,564 people. The prevalence of Diabetes Mellitus sufferers in Lampung Province is 0.7% with the number of diabetic patients 38,923 people (Lampung Provincial Health Office, 2020) in (Oktavia et al., 2022).

Specific signs and symptoms of Type II DM namely polyuria (frequent urination), polydipsia (excessive thirst), polyphagia (increased appetite), weight loss, weakness, fatigue and drowsiness, malaise (feeling unwell), tingling in the extremities, skin infections and pruritus (itching), symptoms of ketoacidosis and somnolence if severe (Pratiwi et al., 2022). The impacts that can occur due to diabetes mellitus include physical and psychological domains, such as diabetic retinopathy, diabetic nephropathy, and diabetic neuropathy which occur in the physical of domain, while in the psychological of domain that can occur are loss of hope, depression, loneliness, helplessness, anxiety, anger, grief, shame and guilt, other things that may occur are becoming passive, dependent on others, feeling uncomfortable, confused and feeling miserable (Smeltzer & Bare, 2018; (Wanaraja, 2020).

The four pillars of diabetes mellitus patient management are crucial for controlling the disease's progression and complications. These pillars include education, nutritional therapy, physical

activity, and pharmacology. A glycosylated hemoglobin (HbA1c) test, which measures the success of blood glucose control, can be used to assess the patient's condition over the past 2-3 months (Marbun et al., 2022). Diabetes mellitus is a lifelong condition that can affect the patient's quality of life. Living with diabetes can negatively impact the quality of life of patients with or without complications. Quality of life in diabetes patients can be defined as the patient's feelings about life in general and life with diabetes (Retnowati and Satyabakti, 2014).

The goal of diabetes mellitus therapy is to improve quality of life. Quality of lifee is perception of indvidual their position in life, their cultural context, their valuee system, and their relationship to life goals, expectations, standards, and other related issues. Quality of life encompasses a broad and complex range of issues, including physical health, psychological status, level of freedom, social relationships, and environment in which their live (Jacob & Sandjaya, 2018).

Quality of life has four areas for measuring quality of life: physical health, psychological health, social relationships, and the environment (Ginting & Saragih, 2021). According to Setiawan et al., 2020, 10 respondents (32.3%) experienced good quality of life in diabetes mellitus patients at Dr. A. Dadi Tjokrodipo Regional Hospital in Bandar Lampung City experienced good quality of life, while 21 respondents (67.7%) experienced poor quality of life.

The aim of this study was to determine the description of the quality of life of type II diabetes mellitus patients at Dr. H. Abdul Moeloek Regional Hospital, Lampung Province.

METHOD

Method for the research used is quantitative with a descriptive research design. This study was conducted on patients diagnosed with Diabetes Mellitus of Type II at the Abdul Moeleok Regional Hospital Clinic, Lampung Province. This study was conducted on August 22 , 2024. The population in this study was all patients diagnosed with Diabetes Mellitus of Type 2 (242 peoples) with a sample of 70 patients selected by accidental sampling. The inclusion criteria included Diabetes Mellitus II patients who were undergoing treatment at the RSAM Clinic. The research instrument used the DQOOL questionnaire (Qulufibah, 2023). Data analysis was univariate and presented in frequencys distribution and percentages.

RESULTS AND DISCUSSION

Data on the quality of life Diabetes Mellitus of Type II patients at Dr. H. Abdul Moeloek Regional General Hospital, Lampung Province is presented in tabulars form and explained as follows:

Frequency Diabetes Mellitus of Type II Patients at Dr. H. Abdul Moeloek Regional General Hospital, Lampung Province Based on Respondent Characteristics.

Table 1. Characteristics of Respondents in RSUD Dr. H. Abdul Moeloek Provinsi Lampung

Variabel	N	%
Age		
35- 40 years old	13	18.6
41- 50 years old	36	51.4
51- 60 years old	20	28.6
>60 years old	1	1.4

Sex		
Male	9	12.9
Female	61	87.1
Occupation		
Enterpreneur	5	7.1
Labor	10	14.3
Civil Servant	7	10.0
Teacher	14	20.0
Merchant	15	21.4
House Wife	19	27.1
Education		
Elementary School	9	12.9
Junior High School	30	42.9
Senior High School	12	17.1
Bachelor	19	27.1

Almost half of the respondents aged 41-50 years as many as 36 people (51.4%), aged 51-60 years as many as 20 people (28.6%), 35-40 years as many as 13 people (18.6%) and > 60 years as many as 1 person (1.4%). Gender obtained almost all of them are women as many as 61 people (87.1%), and men as many as 9 people (12.9%). The occupation of the respondents was obtained that most of the respondents were housewives as many as 19 people (27.1%), traders as many as 15 people (21.4%), teachers as many as 14 people (20.0%), laborers as many as 10 people (14.3%), civil servants as many as 7 people (10.0%), self-employed as many as 5 people (7.1%). Respondents' educational attainment was 30 (42.9%), 19 (27.1%), 12 (17.1%), and 9 (12.9%).

Quality of Life Diabetes Mellitus of Type II Patients at Dr. H. Abdul Moeloek Regional Hospital, Lampung Province.

Tabel 2. Frequency Distribution of Quality of Diabetes Mellitus Life of Type II Patients in RSUD Dr. H. Abdul Moeloek Provinsi Lampung

Quality Of Life	Frequency	Percentage
Good	38	54.3
Poor	32	45.7
Amount	70	100

Based on table 2, it was found that the majority of respondents with type II DM had a good quality of life, as many as 38 people (54.3%), and a poor quality of life as many as 32 people (45.7%).

Respondent Characteristics by Age, Gender, Occupation, and Education.

Table 1 shows that almost half of the respondents (36 people) were aged 41-50 years (51.4%), followed by 20 (28.6%) aged 51-60 years, 13 (18.6%) aged 35-40 years, and 1 (1.4%) aged over 60 years. This is consistent with research (Scarton et al., 2023) that found that those aged 45 and over have a higher risk of developing type 2 diabetes mellitus compared to those under 45 due to the increased incidence of glucose intolerance caused by degenerative factors that impair the body's ability to manage glucose. This is due to decreased physical activity, loss of muscle mass, and increased body fat experienced by those aged 40 and over (Pulungan et al., 2018).

The table above shows that 61 patients with type 2 diabetes mellitus are female, while 9 are male. The study results show that there are more female patients than male patients. This is consistent with research conducted by Rediningsih &

Lestari (2022), which showed that female respondents had a 2.15 times greater risk of developing type 2 diabetes mellitus than male respondents. This is because women tend to have high-risk dietary patterns, such as high sugar and fat consumption. Furthermore, low levels of physical activity can also increase the risk (Islam, 2021).

According to research conducted by Mei Fitria Kurniati (2023), type 2 diabetes mellitus has a strong relationship with gender differences. These differences occur due to various factors, including hormonal differences, social and cultural behaviors, environmental changes such as diet, lifestyle, stress, attitudes, and the interaction between genetic and environmental factors. Women are more likely to develop type 2 diabetes mellitus at an earlier and younger age. They are also susceptible to having a higher body mass index (BMI) than men. On the other hand, obesity, a strong risk factor for type 2 diabetes mellitus, is more frequently found in women after diagnosis (Gayatri, 2019). Therefore, women with a higher BMI are more likely to develop type 2 diabetes mellitus than men. One contributing factor is the increased adipocyte capacity in women, which can lead to excessive fat accumulation. In addition, hormonal changes that occur during menopause reduce estrogen production in women, causing changes such as increased fat tissue around the abdomen, which is pro-inflammatory (Megawati et al., 2020).

The study stated that most respondents had the job status of housewives, because household chores are one of the causes of reduced physical activity and stress. Housewives tend to have less physical activity. Occupations such as farming, trading, and civil servants can put someone at risk for diabetes mellitus. Light or low-impact physical activity contributes to the risk of diabetes mellitus due to decreased energy expenditure, which can lead to excess energy being stored as fat, leading to obesity (Wulandari et al., 2020).

Education level influences the incidence of diabetes mellitus. People with a higher level of education typically possess a wealth of health knowledge. This knowledge fosters awareness of health care (Al-Rasheedi, 2021). Education also influences a person's physical activity levels, as it is related to their work. People with higher levels of education typically work in offices with minimal physical activity. Meanwhile, those with lower levels of education are more likely to be laborers or farmers with moderate to heavy physical activity. Increasing education levels will increase awareness of healthy living and lifestyle and dietary habits. Individuals with lower levels of education are risk of paying less attention to lifestyle and dietary habits, as well as to what to do to prevent diabetes (Thomas et al., 2022).

Overview of Quality of Life Diabetes Mellitus of Type II Patients.

Table 2 shows that the majority of respondents with type II diabetes (38) had a good quality of life, while 32 (45.7%) had a poor quality of life. This is consistent with previous research, which showed that a higher proportion of DM patients had a poor quality of life than those with a good quality of life. This is due to physical pain that hinders daily activities, feelings of hopelessness in their illness, and decreased work productivity (Mustofa et al., 2023; Thomas et al., 2022).

Previous research found that 52.8% of DM patients had a poor quality of life, with some feeling dissatisfied with their lives due to physical changes such as fatigue and impaired physical activity due to elevated blood sugar levels (Thomas et al., 2022). Poor quality of life in DM patients can exacerbate metabolic disorders. Likewise, DM sufferers have a good quality of life can control their blood sugar levels in their bodies, thereby preventing physical complaints and facilitating the DM treatment process (Parik & Patel, 2019).

There are three domains: satisfaction, impact, and worry. The highest average score was in the worry domain. DM sufferers in this study experienced high levels of worry about reduced physical abilities. DM sufferers felt that their disease could worsen and risk causing additional illnesses. According to Liao et al. (2023), patients who learn they are diagnosed with DM worry about what will happen in the future. This condition further causes anxiety that ultimately worsens quality of life. Meanwhile, the impact domain of DM causes a decline in physical and psychological conditions, which is exacerbated by changes in the lives of older adults, such as changes related to work, which many find themselves without work (Arania, Triwahyuni, Esfandiari, et al., 2021).

CONCLUSIONS AND RECOMMENDATIONS

The characteristics of respondents based on age are mostly 35-40 years, gender is female, most occupation is housewife (IRT), and most education is junior high school. The results of the study from 70 respondents showed that the most dominant respondents with type II diabetes had a good quality of life as many as 38 people (54.3%), while the quality of life was poor as many as 32 people (45.7%).

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