

Analysis of Depression Levels in Type 2 Diabetes Mellitus Patients at 'Aisyiyah General Hospital Ponorogo

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Abstract:

Diabetes mellitus type 2 is a common health problem in Indonesia. Depressive symptoms are common among adults with diabetes. Clinically significant depression is present in one of every four people with type 2 diabetes mellitus. A diagnosis of type 2 diabetes mellitus increases the risk of incident depression and can contribute to a more severe course of depression. The aim of the study was to estimate the prevalence of depression in the population diagnosed with diabetes type 2. Respondents were patient with type 2 diabetes mellitus in Kardinah Hospital. This research is quantitative descriptive. The sampling technique using accident sampling with 60 individuals with type 2 diabetes mellitus. The data was taken by instrument using PH9. Data was analyzed by univariate test. The result of the analysis 82,3% no symptom of depression and 17,7% have a depression. Depression at all levels in DM sufferers cannot be ignored, intervention must be obtained. Because depression makes health problems worse.

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INTRODUCTION

Diabetes Mellitus (DM) is a genetic disease with abnormal blood sugar levels that can be caused by insulin secretion, insulin action or even a combination of both. DM is a disease that requires long treatment, so it can have an impact on reducing quality of life, poor self-care, impaired glycemic control, decreased level of treatment compliance, and increased risk of diabetic complications (Kurniyawan et al., 2023; Kurdi et al., 2021). This triggers stress and patient survival in their lives.

Diabetes mellitus has both physical and psychological impacts on the patient. The physical impacts that appear in Diabetes Mellitus patients include polyuria, polydipsia, polyphagia, complaining of fatigue, and drowsiness; besides that, they can experience blurred vision, weakness, and headaches. While the psychological impacts include anxiety, anger, grief, shame, guilt, loss of hope, depression, loneliness, and helplessness (Lestari et al., 2024).

Diabetes is a disease that requires therapy and treatment for a long time and can cause boredom, anxiety and even frustration in patients. Therefore, both internal and external motivation is needed for patients to be able to undergo all diabetes therapy and treatment processes. Some of these stressors, if not handled properly, will be able to reduce the level of resilience of people with DM and ultimately have an impact on reducing the quality of life of people with DM (Nainggolan, 2022).

Degmecic et al. (2014) summarized the psychosocial factors that affect the prevalence of depression in patients with diabetes, it turns out that depression in type 2 diabetes mellitus is more common: women, racial minorities, someone who is not married in middle age, social status, low economic status and not working (Degmecic, 2014).

Degmecic's opinion is corroborated by the research of Schmitz Norbert (2014), where depression is increasing in a person as a result of risk factors such as sociodemographics, chronic diseases, lack of communication, and lack of public knowledge about depression (Schmitz, 2014).

Depression is one of the biggest problems of psychological disorders in patients with type 2 diabetes mellitus, with a prevalence of between 24% and 29%. Depression in type 2 diabetes mellitus is also strongly associated with the inability to control glycemic, increased complications, increased mortality, reduced physical function and mental function, and increased health costs. (Saleh, 2020; Kurniyawan et al., 2023).

Ironically, the treatment of depression in patients with type 2 diabetes mellitus seems to receive less attention than other diabetes complications. This lack of attention should not be the case, given that depression is associated with diabetes complications and mortality. Evidence suggests that recognition and treatment for depression are less than ideal and particularly in primary care settings where most patients with diabetes receive physical care only (Thahir & Masnar, 2021). For example, in Palestine, 294 patients were surveyed for depression and demographic data such as age, gender, body mass index, education level, etc., in patients with diabetes mellitus; the results were 40% of patients screened for depression, but none were treated. Psychosocial assessment should be part of the clinical routine for patient evaluation in primary care to improve quality of life and reduce adverse outcomes in patients with diabetes mellitus (El Sharif & Imam, 2021).

The psychological reactions that may arise are another problem for the health team in addition to the problem of diabetes mellitus itself, which will further affect the management of patients. From the point of view of health workers, this means the prevalence of mild mental disorders and the risk of severe mental disorders. The emergence of these psychiatric problems means that mental nursing science can play a role in handling patients, especially those who experience psychiatric problems as above. This must be realized by the health team, especially in order to take a wise attitude in dealing with people with diabetes mellitus, especially when it is associated with the increasing prevalence of diabetes mellitus in Indonesia (Edurne, 2014).

METHOD

The research design used in this study is descriptive research, describing the level of depression in type II Diabetes Mellitus patients. The data taken will be analyzed univariately. The population in this study were type 2 diabetes mellitus patients who were controlled at the outpatient clinic of Aisyiyah Ponorogo General Hospital.

The sample in this study were patients with type 2 diabetes mellitus who met the inclusion criteria: Type 2 diabetes mellitus patients who can read and write, Cooperative

Sampling technique with accidental sampling. The number of samples is 60 people. The variables in this study are independent: Type 2 Diabetes Mellitus and the dependent variable, the level of depression of people with DM. The instrument used in this study was The Patient Health Questionnaire (PHQ-9).

This research was conducted at Aisyiyah Ponorogo General Hospital. The research time began in September to December 2023. Data analysis with Univariate Analysis. Expressed by describing and summarizing data scientifically in tables or graphs (Setiadi, 2007). The variables in

this study include demographic data; the independent variable is the level of depression of type II diabetes mellitus patients. The analysis was conducted to see the frequency distribution and percentage of each variable desired from the distribution table.

RESULT

'Aisyiyah General Hospital (RSUA) Ponorogo is a means of Da'wah in the Health Sector to realize a truly Islamic society through quality health services in order to help others to seek the pleasure of Allah SWT. The purpose of RSUA Ponorogo is to increase the optimal health status for all levels of society in order to realize a truly Islamic society through promotive, preventive, curative, and rehabilitative efforts. RSUA Ponorogo is located at Jl. Dr. Soetomo No. 18 - 24 Bangunsari, Ponorogo District, East Java.

Table 1. Frequency Distribution of Respondents based on Gender, Age, and Length of T2DM (n=60)

Characteristic	Frequency	Percentage
Gender		
Male	24	40
Female	36	60
Age (years)		
30 - 40	5	8.33
41 - 50	9	15
51 - 60	27	45
>60	19	31.67
Length of T2DM		
< 1	1	1.67
1 - 3	22	36.67
4 - 5	5	8.33
5 - 10	14	23.33
>10	18	30

The table above shows that the average number of respondents suffering from type II DM based on gender is 24 men (40%), while 36 women (60%) suffer from type II DM. Most respondents are between 51 to 60 years old, as many as 27 people (45%). The lowest age is 30 to 40 years, as many as 5 people (8.33%). Patients with type II diabetes mellitus (DM type II) in outpatient care based on the length of suffering, most sufferers suffered for 1 to 3 years as many as 22 people (36.67%), and the least length of suffering was less than 1 year as many as 1 person (1.67%).

The level of depression in type II DM patients according to the PHQ19 questionnaire is categorized into 4, namely no symptoms of depression, mild depression, moderate depression and severe depression. There are no symptoms of depression if the number of scores is 0-9, mild depression if the number of scores is 10-15, then the number of scores 16-23 indicates moderate depression and severe depression if the number of scores is 24-63. The results of this study showed 65 people had no symptoms of depression, 12 people who experienced mild depression, and 2 people who experienced moderate depression, while those who experienced severe depression did not exist. The following table illustrates the level of depression in type II DM patients.

Table 2. Frequency Distribution of Respondents' Depression Level (n=60)

Depression Level	Frequency	Percentage
Not depressed	13	21.67
Minimal depression	25	41.67
Mild depression	12	20
Moderate depression	7	11.67
Moderate severe depression	2	3.33
Severe depression	1	1.67
Total	60	100

From the table above, it is known that the highest level of depression of DM patients is in minimal depression, as many as 25 people (41.67%), and the least in severe depression, as many as one person (1.67%).

DISCUSSION

Gender Overview

In this study, the research subjects selected were type II DM, obtained the distribution of research subjects based on gender were men as many as 42 people (53.2%), while women were 37 people (46.8%); this shows that who came to the Outpatient Hospital Aisyiyah Ponorogo when this research was conducted more men than women.

Likewise, in research conducted by Nadyah (2011) at the Endocrine Polyclinic of Prof. Dr. R. D. Kandou Hospital Manado, out of 138 cases, 78 patients were women (57%), and 60 patients (43%) were men. Added again, research conducted by Dillard et al. I (2013) showed that of the 294 patients studied, 164 patients (55.8%) were women, and the rest were men.

Gender is one of the factors associated with the occurrence of type 2 diabetes mellitus. Women tend to be more at risk of developing type 2 diabetes mellitus. This is because women have higher cholesterol than men, and there are also differences in carrying out all daily activities and lifestyles that greatly affect the incidence of type 2 diabetes mellitus.

Age Overview

The distribution of patients with type II DM based on age is that the average age range of the youngest research subject is 36 years, and the oldest is 60 years, with an average age of 48. Type II diabetes mellitus appears at the age of over 40 years because at the age of 40 years and above, the body undergoes many changes, especially in the pancreas organ that produces insulin in the blood. Decreased pancreatic function in producing insulin will make the amount of insulin small and insufficient to metabolize glucose. This results in the accumulation of glucose in the blood vessels (Denggos, 2023).

Overview of Duration of Suffering T2DM

Patients with type II diabetes mellitus (type II DM) in outpatient care based on the length of suffering, namely the most suffering for 1 to 3 years, and the least length of suffering is less than 1 year. Chronic diseases such as type 2 DM greatly affect the incidence of depression. People with type 2 DM are required to take insulin therapy for a long period of time and change their food intake. This is very likely to cause additional stress that affects the emergence of depression (Fandinata & Ernawati, 2020).

These results are similar to the results of Ilham (2016), who said that patients with type 2 DM with a duration of 3-4 years (32.3%) experienced more depression than patients with type 2 DM

with a duration of >4 years (24.6%). These results mean that the longer type 2 DM is suffered, the more accustomed the person is to dietary changes, therapeutic interventions, and lifestyle changes that must be applied. Decreasing stress factors can later lead to lower levels of depression experienced.

Most of the respondents were diagnosed with moderate-duration DM. The longer the illness, the longer the treatment process, so that the patient's ability to adjust is getting better. The length of suffering from DM also affects the belief in treatment, affecting the quality of life.

Overview of Depression Level of Type II Diabetes Mellitus Patients

According to the results of the study, the level of depression of DM patients was mostly in minimal depression, and there was also severe depression. According to research by Ryan. (2022), that the prevalence rate of depression can increase more than twice in type 2 DM and three times greater in type 1 diabetes mellitus to the general population in the world.

In accordance with the research by Ilham (2016), of the 14 individuals who experienced both mild and moderate depression, 7 were male and 7 were female (53.2% and 46.8%). This shows that the percentage of female sufferers is more than men. When compared to research conducted by (Siddiqui, 2014), depression often occurs in women compared to men (32.65% vs 24.69%). Depression experienced in patients with diabetes mellitus can worsen the condition experienced by patients because depression will reduce patient compliance in following the recommended treatment. This will worsen the patient's prognosis, worsen the quality of life, and increase the mortality rate.

CONCLUSION

Demographic features of type II diabetes mellitus patients (type II DM) at Aisiyiah Ponorogo Hospital who were respondents in this study, namely: the respondents' gender was 40% male and 60% female. People the age of most respondents (45%) was between 51 to 60 years, and the length of time suffering from DM most (36.67%) was between 1 to 3 years. In the description of the level of depression in patients with type 2 diabetes mellitus (DM type 2) in the outpatient department of Aisiyiah Ponorogo Hospital, 41.67% experienced minimal depression, and there were 1.67% of respondents experienced severe depression.

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