THE RELATIONSHIP OF THE INCIDENT OF DIABETES DISTRESS AND SELF CARE IN DIABETES MELLITUS PASTIENTS IN SEMARANG

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ABSTRACT

The disease that is often found in the community is diabetes mellitus. Diabetes mellitus is caused by metabolic disorders that occur in the pancreas organ. Diabetic patients will feel frustrated, angry, hopeless, stressed, anxious, and emotional, which is called diabetes stress. Patients with diabetes will experience psychological changes including stress due to the treatment they are undergoing. This study aims to determine the relationship between diabetes distress and self care in diabetics. This type of research used is a quantitative method, with a cross sectional approach. The research instrument used was a questionnaire sheet that had been tested for validity in previous studies. The research respondents consisted of 30 diabetes mellitus patients in the inpatient room at Permata Medika Hospital, Semarang, who were taken using total sampling techniques. The test analysis method used is Rank Spearman. There is a relationship between diabetes distress and self-care in diabetes mellitus sufferers in the inpatient ward of Permata Medika Hospital, Semarang. The results of the analysis using the Spearman rank correlation test regarding diabetes distress and self-care of diabetes mellitus sufferers obtained p value of 0.000, meaning p value ≤ 0.05. The coefficient value or, r value = -0.650 shows a strong relationship in the negative direction, so it means the diabetes distress is getting lighter. the better the self-care behavior. Based on the results obtained, it can be concluded that there is a relationship between diabetes distress and self-care in diabetes mellitus sufferers in the inpatient ward of Permata Medika Hospital, Semarang.

Kata Kunci : Diabetes Mellitus, *Diabetes Distress*, *Self Care*

INTRODUCTION

A disease that is often found in the community is diabetes mellitus, where DM is a threat to public health status because it can cause blindness, kidney failure, and gangrene in sufferers. Diabetes mellitus, or diabetes is a chronic condition that can last a lifetime. Diabetes mellitus is caused by a metabolic disorder that occurs in the pancreas which is characterized by an increase in blood sugar or often referred to as a condition of hyperglycemia caused by a decrease in the amount of insulin in the pancreas (Lestari et al., 2021).

Diabetic patients will feel frustrated, angry, hopeless, stressed, anxious and emotional. Emotional disturbances that occur in people with diabetes mellitus 2 are called *diabetes distress* (Alfalsah & Sutawardana, 2021). *Distress* is anxiety with mixed feelings such as sadness, pain, and even discomfort that a person feels about an event. *Diabetes distress* is a condition of the emotional burden of diabetes felt by sufferers, they will experience mental and physical exhaustion and will feel that their life is always controlled by diabetes.(Nurmaguphita & Sugiyanto, 2019). Self-care is a main behavior that must be carried out by someone who has a chronic illines, such as someone who has diabetes mellitus. Diabetic patients must have self-care behaviors to control their disease and prevent complications (Wayan et al., 2019). If self-care is carried out effectively, the blood sugar levels of diabetes mellitus sufferers can be controlled and the quality of life of diabetes sufferers is optimally achieved (Srywahyuni et al., 2021).

Researchers conducted a preliminary study conducted at the Permata Medika Hospital in Semarang through interviews with 3 diabetes mellitus patients and obtained the results of the interviews, namely that there were 3 patients who said they experienced emotional distress such as psychological imbalance because they were stressed and worried about their illness that had been suffered for more than 5 years. They think about their incurable disease. When they are first diagnosed with diabetes, they deny it, reject it and feel guilty about their disease. They admitted that they had difficulty adjusting to their lives which made them stressed. They feel compelled to comply with the treatment they are undergoing, such as food restrictions, lengthy treatment processes, and expensive medical expenses, which creates an economic burden and a negative outlook on the future. Based on these problems, researchers were interested in conducting a study with the title "The Relationship Between Diabetes Distress and Self-Care in Diabetes Mellitus Sufferers in the Inpatient Room at Permata Medika Hospital, Semarang."

METHODS

In this study, a type of quantitative research was used using a correlational research design. The research design used in this study is Cross Sectional, which is a type of research that only makes observations and measures of variables at one particular moment (Notoadmojo, 2018). The population in this study were all cases of patients with diabetes mellitus, totaling 30 patients in the inpatient room of the Permata Medika Hospital, Semarang, which were in the Arimbi room, Dewi Kunthi room, and Rama room with a total sampling technique. This research was conducted from March to July 2023. The instrument used on the diabetes distress variable was a diabetes distress scale questionnaire consisting of 17 statements that had been tested for validity with the results of the validity test obtained an r value between 0.534-0.607. The results of the reliability test on the DDS questionnaire conducted by previous studies obtained a Crobach's Alpha value of > 0.87.

The self-care variable uses the Summary of Diabetes Self-Care Activity (SDSCA) questionnaire which consists of 15 questions related to activity. The results of the validity test on the self-care questionnaire the study (Putri, 2017) gave results showing r counts in the range 0.363-0.728, which means the questions are valid. The results of the reliability test on the self care questionnaire conducted in Putri's research (2017) showed that the result was r alpha Cronbach's 0.855, which means the instrument is reliable.

The method of data collection was carried out using a questionnaire given directly to diabetes mellitus patients in the inpatient room. Patients filled out questionnaires accompanied by researchers. The questionnaire was input into Excel with data processing via SPSS 25 to process and analyze data starting from respondent characteristics, independent variables, dependent variables, as well as the results of univariate analysis and bivariate analysis.

RESULT

Research results on the characteristics of respondents based on age, gender, education, occupation, length of suffering.

Tabel 1 Distribution of Respondent Characteristics

Respondent Characteristics	Amount	Presentase (%)
Age		
19-40 Year	2	6.7
45-65 Year	20	66.7
>65 Year	8	26.7
Gender		
Man	12	40.0
Woman	18	60.0
Education		
Not completed in primary school	10	33.3
Elementary school	8	26.7
SLTP / Sederajat	3	10.0
SLTA / Sederajat	6	20.0
Academy/PT	3	10.0
Work		
Doesn't work	10	33.3
Laborer	1	3.3
Farmer	4	13.3
Entrepreneur/trader	7	23
Civil Servants	1	3.3
Etc	7	23.3
Long suffering from diabetes		
5-11 months	2	6.7
1-5 years	17	56.7
>5 years	11	36.7

Based on table 1 the majority of respondents were aged 45-65 years with a total of 20 (66.7%) respondents. In this study, most of the respondents were female with a total of 18 (60.0%) respondents. Most respondents' last education did not complete elementary school with 10 (33.3%) respondents. Occupation of the majority of respondents did not work as much as 10 (33.3%). Respondents with a long history of diabetes for 5-11 months were 2 (6.7%) respondents, those who had diabetes for 1-5 years were 17 (56.7%) respondents, and those who had diabetes for >5

years were 11 (36.7%) respondents.

Tabel 2 Distribution of *Diabetes Distress*

Diabetes Distress	Amount	Presentase (%)
Light level	6	20.0
Medium level	19	63.3
Weight level	5	16.7
Total	30	100.0

Based on the variable frequency distribution table of diabetes distress from 30 respondents, the majority of respondents experienced diabetes distress at a moderate level with a total of 19 respondents.

Tabel 3 Distribution of *Self Care*

Self Care	Amount	Presentase (%)
Not enough	8	26.7
Good	22	73.3
Total	30	100.0

Based on the self care variable distribution table, the most respondents had good self care, namely 22 respondents (73.3%).

Tabel 3 The Correlation between Diabetes Distress and Self Care in Semarang

		Kesiapan Kemoterapi	Tingkat Kecemasan
Diabetes Distress	Correlation Coefficient	1.000	-.650**
	Sig. (2-tailed)	.	.000
Spearman's rho	N	30	30
Self Care	Correlation Coefficient	-.650**	1.000
	Sig. (2-tailed)	.000	.
	N	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

Based on the Rank Spearman statistical test carried out on the variable diabetes distress and self-care in patients experiencing diabetes mellitus in the inpatient ward of Permata Medika Hospital, Semarang, a significant value of 0.000 (sig <0.05) was obtained, which means that there is a relationship between diabetes distress and self-care in patients who experienced diabetes mellitus in the inpatient room at Permata Medika Hospital, Semarang, with a correlation value of (r = -0.650), that is, the correlation was strong.

DISCUSSION

1. Characteristics respondents in people with diabetes mellitus

The characteristics of respondents who suffer from diabetes mellitus are age, gender, education, occupation and length of suffering. The research results were mostly 40-65 years old, 20 respondents (66.7%). Increasing age puts a person at risk of increasing the incidence of DM. The results of this study are in line with (Nurmaguphita & Sugiyanto, 2019) where people over 45 years old have an eight times higher risk of suffering from type 2 DM than people under 45 years old. Characteristics of respondents based on gender, the majority were 18 respondents (60.0%) female. This shows that women are more at risk of developing diabetes mellitus than men. Women have a higher body fat composition compared to men, so women get fat more easily, which is associated with the risk of obesity and diabetes (Komariah & Rahayu, 2020).

Characteristics of respondents based on education shows the result that most of the respondents did not finish elementary school, amounting to 10 respondents (33.3%). This research is in line with research conducted by (Endra Cita, 2019) which shows that the educational characteristics of diabetes patients are most of the respondents having elementary school education/equivalent, namely 27 respondents (52.9%). An educated person when encountering a problem will try to think as well as possible in solving

the problem. People who are well educated tend to be able to think calmly about a problem.

The characteristics of respondents based on work showed that the majority of respondents who did not work were 10 people. Someone who has an income tends to be able to maintain a healthy lifestyle and can do self-care well compared to those who have a less good income (Adimuntja, 2020). Work with light physical activity will cause a lack of energy burning by the body so that excess energy in the body will be stored in the form of fat in the body which results in obesity which is a risk factor for diabetes mellitus (Arania et al., 2021).

The characteristics of respondents based on length of suffering showed that the majority of respondents had diabetes for 1-5 years, 17 people. The longer a person experiences diabetes mellitus, the greater the risk of developing complications such as diabetic ulcers, retinopathy, nephropathy, neuropathy, CAD and PAD (Cahyono & Purwanti, 2019).

2. *Diabetes Distress* in Patients with Diabetes Mellitus in the Inpatient Room of Permata Medika Hospital Semarang

In this study, as many as 19 respondents showed that most of them experienced diabetes distress at the moderate level category. Respondents who experience moderate-level distress diabetes because they have accepted their diabetes. They feel that their life is not always a failure because they have diabetes. They can still do their daily activities without spending a lot of energy and mentally because of their illness.

Research conducted by (Naibaho, 2020) also shows that the majority of diabetes patients experience moderate stress. Moderate stress usually lasts a few hours to a few days. Diabetic patients who have moderate levels of stress are characterized by irritability, sensitivity, difficulty resting, feeling tired due to anxiety, impatience, restlessness, and not being able to understand things that can disturb them.

3. *Self Care* in Patients with Diabetes Mellitus in the Inpatient Room of Permata Medika Hospital Semarang

The results of this study showed that the majority of patients who had good self-care were 22 people. Patients who have good self-care because they are able to follow a good diet based on doctor's and nurse's instructions. They quite often check their blood sugar at home and at health services. Even though they rarely exercise, they work all day which makes the body move.

Research conducted (Munir & Solissa, 2021) shows that the majority of 34 respondents (83%) have good self-care. Self care is a person's ability to care for themselves independently so that they can maintain their health and well-being. Self-care refers to a person's activity of doing something in their life independently to improve and maintain their health (Ernawati, 2013).

4. **The Relationship between the Incidence of *Diabetes Distress* with *Self Care* in Patients with Diabetes Mellitus in the Inpatient Room of Permata Medika Hospital Semarang**

The results in the Spearman Rank statistical test conducted regarding diabetes distress with self care in diabetes mellitus patients in the inpatient room of Permata Medika Hospital Semarang obtained a significance value of 0.000 (p value ≤ 0.005), which means that there is a relationship between diabetes distress and self care in patients diabetes mellitus in the inpatient room of Permata Medika Hospital, Semarang.

This study is in line with research (Januar Ary, Widayanti nur, 2017) using the Spearman Rank statistical test found that p value <α (0.000≤0.05), so it can be concluded that there is a significant relationship between diabetes distress and self-care behavior in people with type DM 2 in the working area of the Rambipuji Health Center. The correlation (r) obtained was -0.63 which showed that there was a strong relationship between diabetes distress and self-care behavior in people with type 2 DM.

CONCLUSION

The results of the study show that the characteristics of respondents in diabetes mellitus sufferers are that most of them are 40-65 years old, 20 people. The majority gender is female as many as 18 people, the majority's education has not completed elementary school as many as 10 people, the majority's occupation is not working as many as 10 people, and the majority have suffered from diabetes for 1-5 years as many as 17 people. The results of the study showed that the majority of those experiencing diabetes distress were in the moderate level category, namely 19 respondents. The research results showed that the majority of respondents who had good self-care were 22 people. The results of the Spearman's Rank statistical test conducted on diabetes distress with self care in diabetes mellitus patients in the inpatient room of the Permata Medika Hospital in Semarang obtained a significance value of 0.000 (p value ≤ 0.005), which means that Ha is accepted and Ho is rejected. So that there is a relationship between diabetes distress and self care in diabetes mellitus patients in the inpatient room of the Permata Medika Hospital, Semarang. To see the direction of the variable relationship, the closeness of the correlation is strong in a negative direction, which means the milder the diabetes distress, the better the self care.

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