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Bangkalan, 21 November 2022

(Rahmad Wahyudi)

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SCHOOL OF HEALTH SCIENCES
NGUDIA HUSADA MADURA

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(*DESCRIPTION OF ETHICAL CLEARANCE*)

NO: 1214/KEPK/STIKES-NHM/EC/V/2022

Setelah Tim Komisi Etik Penelitian Kesehatan (KEPK) Sekolah Tinggi Ilmu Kesehatan Ngudia Husada Madura, mempelajari dengan seksama rancangan penelitian yang diusulkan dengan judul :

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"TINGKAT DISTRES PASIEN DIABETES MELITUS DENGAN ANALISIS DIABETES SELF MANAGEMENT"

Peneliti Utama *Principal Investigator*	**: RAHMAD WAHYUDI, S.Kep.,Ns.,M.AP.,M.Kep.**
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Prodi *Study Program*	: S1. Keperawatan
Afiliasi *Affiliation*	: STIKes Ngudia Husada Madura
Tempat Penelitian *Setting of research*	: Di Wound Center Madura

Dinyatakan"**LAYAK ETIK**"sesuai 7 (tujuh) Standar WHO 2011, yaitu 1) Nilai Sosial, 2) Nilai Ilmiah, 3) Pemerataan Beban dan Manfaat, 4) Risiko, 5) Bujukan/Eksploitasi, 6) Kerahasiaan dan Privacy, dan 7) Persetujuan Sebelum Penjelasan, yang merujuk pada Pedoman CIOMS 2016. Hal ini seperti yang ditunjukkan oleh terpenuhinya indikator masing-masing Standar.

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Distress Levels Of Diabetes Mellitus Patients With Diabetes Self-Management Analysis

by Dito Anurogo

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Distress Levels Of Diabetes Mellitus Patients With *Diabetes Self-Management* Analysis

Abstract

Patients with Diabetes Mellitus face challenges related care management disease, treatment proper self, and examination of possible routine _ causes of diabetic distress. Distress condition covers emotional stress, emotional and behavioral challenges consequence burden management self.

The purpose of the study to know the distress level of diabetes mellitus patients with diabetes self-management analysis at Wound Center Madura.

The study used analytic correlation through a cross-sectional approach. Diabetes self-management was variable independent and distress level was variable dependent. Taking a sample of 55 patients using the purposive sampling method at Wound Center Madura with criteria inclusion, DM type 1 and 2 patients can read and write and were undergoing care wounds with ulcer diabetes. Distress instruments used *Diabetes Distress Scale* and *Diabetes Self-Management Questionnaire*. This study used the Spearman rank correlation test.

The statistical test results show *p-value* = 0.000 < α = 0.05. showing that there is a connection between *diabetes self-management* with distressed diabetes mellitus patients at *Wound Center* Madura.

Several factors can take affect the distress of diabetes mellitus patients that as age, type gender, and long-suffering. The more understand the disease so the more understanding of how nurses and controlling distress in diabetes mellitus patients.

Keywords: **Diabetes** *mellitus, Diabetes self-management, Distress*

INTRODUCTION

Diabetes Mellitus is a metabolic disease, which becomes a problem in world health and experiences an enhancement amount sufferers every year (Alfian et al., 2021). Diabetic patients are confronted with various types of stress and must obey various management diseases, treatment proper self, and examination of possible routines _ that cause diabetic distress. Condition distress among them covers emotional stress , emotional and behavioral challenges consequence burden management self, and worries related to diabetes mellitus (Ghaemi et al., 2021).

Based on from data from the *International Diabetes Federation*, as many as 537 million people were recorded as people with diabetes mellitus, and is predicted to be 643 million in 2030, and 783 in 2045. In Indonesia, the prevalence of diabetes mellitus disease in 2021 is as many as 19.5 million. this figure is an increase of 37% in 10 years final (International Diabetes Federation, 2021). in a studies in Bangladesh conducted from July 2019 to June 2020 obtained of 259 adults with diabetes mellitus _ type 2, as much as 52.5% experienced diabetic distress (29.7% with distress moderate and

22.8% with distress high) (Kamrul-Hasan et al., 2022). In research conducted in Bandung Indonesia, as many as 36.2% of patients suffering from diabetes mellitus have pressure distress category currently until tall (Alfian et al., 2021).

The results of the visit report of diabetes mellitus patients in November-December 2021 at *Wound Center* Madura were 175 patients, out of 10 patients, 5 patients had high levels of distress, 2 patients had moderate distress and 3 patients had low distress. Based on the questionnaire, the patient feels that diabetes controls life especially in activities and the patient feels that it will end in serious long-term complications, being the statement with the highest points.

Distress in diabetic patients is related to several factors, including length of suffering, age, complications, gender, comorbidities, level of education, and *self-management.* (Hu et al., 2020) Efforts are needed to prevent the occurrence of distress or other emotional problems in people with diabetes mellitus. Given the high risk of distress in diabetes mellitus patients, interventions are needed to strengthen the emotional response of people with Diabetes Mellitus, for example by providing education about *Diabetes Self-Management* so that diabetes mellitus patients can understand the problems surrounding diabetes mellitus in a structured and directed manner, so that the risk of distress can be reduced. reduced (Erida Silalahi et al., 2021).

METHODS

This study uses correlation analysis with a *cross-sectional approach.* The independent variable of this study is *diabetes self-management while* the dependent variable is distress. This research was conducted at the *Wound Center* Madura wound care home with a population of diabetes mellitus patients experiencing distress being treated at the Madura *Wound Center* in March 2022-June 2022 with an estimated 102 patients with a total sample of 55 patients taken using a *purposive* sampling technique. Respondents' inclusion criteria were typed 1 and 2 DM patients who agreed to an informed consent sheet, were able to read and write who were undergoing wound care with diabetic ulcers, aged more than 12 years while the exclusion criteria in this study were patients undergoing long-term treatment other than diabetes or were undergoing radiotherapy, chemotherapy, and organ transplantation and other chronic disease complications.

The instrument in this study used the Diabetes Self-Management Questionnaire (DSMQ) with parameters, Dietary adjustments (diet), Physical exercise, Medication, Blood glucose control, and Foot care while measuring the level of distress using the *Diabetes Distress Scale* (DDS 17) with

parameters, Burden emotional, Relationship with health workers, Self-care difficulties, Interpersonal distress.

Research data were analyzed using the *Spearman rank* statistical test with a degree of 95% confidence degree = 0.05, if *the p-value ≤ α (alpha)* There is a relationship between *diabetes self-management* and distress in diabetes mellitus patients. The results of the ethical clearance test (*Ethical Clearance*) with number: 1214/KEPK/STIKES-NHM/EC/V/2022 by the Health Research Ethics Commission for the High School of Health Sciences (STIKes) Ngudia Husada Madura were declared with the status of passing the ethical test (*Ethical Clearance*).

RESULTS

Demographic general data discusses the characteristics of diabetes mellitus patients, this data is presented in the form of a frequency distribution table.

Characteristics of Respondents	Frequency	Percentage (%)
Age		
36-45 years (Late Adult)	14	25.5
46-55 years (Early Elderly)	18	32,7
56-65 years (Late Elderly)	18	32,7
> 65 years (Elderly)	5	9,1
Gender		
Woman	36	65.5
Man	19	34.5
Long Suffering DM		
<5 years	16	29.0
5-10 years	25	45.5
>10 years	14	25.5

Table 1 shows 3 data on the general characteristics of respondents related to the results of the study (age, gender, duration of DM disease)

From the frequency distribution of age data, a small portion of diabetes mellitus patients are in the age range of 46-55 years (Early Elderly), 18 patients (32.7%, and aged 56-65 years (Late Elderly), 18 patients (32.7%).) Frequency distribution Based on gender, the majority of diabetes mellitus patients were female, 36 patients (65.5%). Frequency distribution Based on the length of diabetes mellitus, nearly half of diabetes mellitus patients had diabetes for 5-10 years. 25 patients (45.5%).

Table 2 shows the frequency distribution of patients with diabetes mellitus based on diabetes self-management and the level of distress of patients at Wound Center Madura.

Respondent Characteristics	Frequency	Percentage (%)
Diabetes Self-Management		
Bad	3	5,5
Enough	29	52,7
Well	23	41.8
Distress Level		
Tall	22	40.0
Currently	15	27,3
Low	18	32,7

From the frequency distribution of *diabetes self-management data,* there were 29 patients (52.7%) with, a good distress level, 23 patients (41.8%), and poor 3 patients (5.5%). Meanwhile, from the level of distress, almost half of the diabetes mellitus patients were in the high distress category, 22 patients (40.0%), 18 patients (32.7%) in low distress, and 15 patients (27.3%) in moderate distress.

Table 3 Cross-tabulation of the Relationship between Diabetes Self-Management and Distress in Diabetes Mellitus Patients at the Wound Center.

		Distress						Total	
		Tall		Currently		Low			
		F	%	F	%	F	%	F	%
Diabetes Self-Management	Bad	3	5,5	0	0.0	0	0.0	3	5,5
	Enough	15	27,3	9	16,4	5	9,1	29	52,7
	Well	4	7,3	6	10,9	13	23,6	23	41.8
Total		22	40.0	15	27,3	18	32,7	55	100.0
		Spearman Rank Statistical Test α = 0.05 p = 0.000 r = 0.491							

Cross tabulation of data shows that of diabetes mellitus patients who have sufficient *self-management diabetes,* almost half have high distress, a number 15 patients (27.3%), a small proportion have moderate distress, and a number 9 patients (16.4%). Meanwhile, patients with good *self-management diabetes* had a small proportion of 13 patients (23.6%) with low distress. From the analysis of the *Spearman Rank test, it was* found that the *p-value was* 0.000, meaning that the *p-value* = <α (0.05). The correlation coefficient value is 0.491 so H1 is accepted. It can be concluded that there is a relationship

between *diabetes self-management* and the level of distress at the Madura *Wound Center* with a moderate interpretation.

DISCUSSIONS

The results showed that most of the patients aged 46-55 years (early elderly) had good *diabetes self-management*. As the individual ages, experience related to *diabetes self-management* increases and there is an increase in the process of rational thinking maturity. This maturity of thinking makes the patient consider the benefits and goals obtained by carrying out *diabetes self-management of* the risks that will be faced if this self-management is not carried out. This is supported by a research journal (Erida Silalahi et al., 2021). Data based on gender, almost half of diabetes mellitus patients are female, where women pay more attention to themselves during treatment and make more efforts to always comply with treatment recommendations. This is supported by research (Anita, 2020) that women seem to pay more attention to their condition than men, so they try to carry out *self-management*. women tend to have more negative vigilance when facing conflicts that trigger the body to produce negative hormones, causing stress, anxiety, and feelings of fear. So women will more easily fall into a state of distress when under pressure (Hu et al., 2020). Old data on diabetes mellitus shows that almost half of diabetes mellitus patients have a history of suffering for 5-10 years. The longer a person suffers from diabetes, the ability to understand and adapt during treatment will increase. This understanding encourages diabetes mellitus patients to be more able to anticipate and adapt to stressors (Alzughbi et al., 2020).

Diabetes Self-Management can be seen from the ability of a person with diabetes to understand the conditions experienced by their disease, management, and good self-management regarding the management of diabetes mellitus. One thing that can be done is to use health services to obtain information about the management of diabetes mellitus by health workers, in addition to the importance of routine blood sugar control for early detection of blood sugar values and managing the risk of complications by implementing better *diabetes self-management* and discipline. Routine self-checking of blood sugar will be a reference for patients with diabetes mellitus to carry out *diabetes self-management,* such as choosing food for the diet, taking medication or insulin, carrying out physical activity, and utilizing health services for health checks (Enggarwati et al., 2020). Understanding the management of diabetes mellitus affects patient adherence in carrying out disease management, whether management requires health services or is carried out independently, people with diabetes mellitus will be motivated to manage the disease (Dehghan et al., 2017).

Distress in diabetic patients due to emotional burden shows high personal emotional burden in patients such as feeling tired in dealing with various disease management. This personal reaction can cause feelings of fear, and anger because diabetes mellitus causes various aspects of life to be limited (Khan & Choudhary, 2018). The adaptive coping abilities possessed by diabetics must be strengthened from the first time they are diagnosed with diabetes mellitus. This is because sufferers have experienced emotional pressure since the first time they received advice to change their lifestyle. This is in line with research (Alzughbi et al., 2020) Emotional burden is the aspect that most influences distress which is an emotional reaction when facing a stressor. In patients with diabetes mellitus, stressors manifest themselves due to emotional pressure, which has an impact on the ability of people with diabetes mellitus to live life, for example, limitations in sugar consumption, and risk factors that exacerbate the disease and lead to death. This triggers distress when diabetes mellitus patients are out of emotional control (Kiriella et al., 2021).

Spearman Rank statistical analysis test showed that there was a relationship between *diabetes self-management* and distress in diabetes mellitus patients at the Madura *Wound Center* with moderate strength. The better *diabetes self-management* behavior performed by people with diabetes mellitus, the lower the psychological impact of diabetes care, the lower the anxiety level at the thought of living with a chronic disease, and the lower the risk and distress level. Compliance with *diabetes self-management regimens* results in controlled blood glucose levels so that disease complications are avoided. Normal blood glucose conditions can reduce the psychological burden that can result in a condition of psychological and emotional stress in people with diabetes mellitus (Lambrinou et al., 2019). According to research (Summers-Gibson, 2021), There is a correlation between self-management of diabetes care and stress, namely the worse the adherence to self-management of diabetes care, the higher the level of distress experienced by people with diabetes mellitus. In another study, according to (Nanayakkara et al., 2018) stress can be caused by a lack of self-management in diabetes mellitus patients which will contribute to higher HbA1c levels. Many adults with diabetes and depressive symptoms experience high levels of emotional distress stemming from worry and their concerns about diabetes. The negative physical and psychological impacts that arise in people with diabetes mellitus will decrease if self-management can be carried out properly because self-management aims to regulate blood glucose levels to remain stable and prevent complications (Masi et al., 2020). Distress can occur due to Strict dietary recommendations will limit the patient's eating patterns and choose less healthy foods. The desire to consume foods that are prohibited for patients with diabetes mellitus and the presence of stress cause patients not to comply with the meal schedule. The stress that arises and the duration of

stress experienced by each person varies while on a diet, especially regarding the amount, type, and inappropriate eating habits before and after suffering from diabetes. (Zainudin et al., 2018)

CONCLUSIONS

Diabetes self-management relates with happening distress in patients with diabetes mellitus*. Diabetes Self-Management* is the ability positive individual to understand and manage guidelines and treatment to maintain control of glycemic and minimize complications and consequences of diabetes mellitus.

Distress Levels Of Diabetes Mellitus Patients With Diabetes Self-Management Analysis

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