



## **THE RELATIONSHIP BETWEEN DIABETES DISTRESS AND SELF-CARE IN PATIENTS WITH DIABETES MELLITUS**

**Lutfi Wahyuni, Umi Azizah Kusmaningrum**

Universitas Bina Sehat PPNI Mojokerto

Corresponding Email: ltf.hidayat@gmail.com

<b>ABSTRACT</b>	<b>Keywords</b>
<p>One of the diseases that often occurs among the public is diabetes mellitus, a chronic condition that can cause worsening problems throughout the patient's life due to metabolic disorders that occur in the pancreas. Diabetes sufferers often experience stress, anger, despair, frustration, and emotional disturbances called diabetes distress. This study aims to determine the relationship between diabetes distress and self-care in diabetes sufferers. This type of research uses a quantitative method, with a retrospective approach. The instrument used in this study was a questionnaire that had been tested for validity in previous studies. Respondents were 66 diabetes sufferers at the Bangsal Community Health Center (UPT Bangsal), selected using a total sampling technique. The results of the analysis using the Spearman rho correlation test obtained a p-value of 0.000, indicating a relationship between diabetes distress and self-care in diabetes sufferers at the Bangsal Community Health Center (UPT Bangsal). The correlation coefficient value of -0.644 indicates a strong closeness with a negative direction, meaning that the milder the diabetes distress, the better the self-care behavior.</p>	<p><i>Diabetes Distress, Self Care, Diabetes Mellitus</i></p>

### **INTRODUCTION**

One of the diseases with the highest prevalence in developing countries is diabetes mellitus, the number of which continues to increase annually. Diabetes distress is a patient's concern about the quality of healthcare. Symptoms of diabetes distress include loss of hope for recovery, low self-esteem, and a lack of capacity to maintain the lifestyle necessary to manage diabetes (Chukwuemeka et al., 2020). According to statistics, Indonesia ranks fifth

in the world for the number of diabetes sufferers. In 2021, the International Diabetes Federation (IDF) reported that 19.5 million Indonesians aged 20 to 79 had diabetes mellitus (Webber, 2021). In East Java, the estimated number of diabetes sufferers reached 854,454 out of the population aged 15 years and older. Health services for diabetes sufferers in 38 districts/cities in East Java have reached 59,187 (100.6%) of the estimated number of sufferers. In 2023, the number of diabetes mellitus sufferers in

Mojokerto City was 7,715 from 6 Community Health Centers with a prevalence of 100.0% (Asiva Noor Rachmayani, 2019). In the working area of Bangsal Community Health Center UPT, cases of diabetes mellitus sufferers reached 1,244 cases, including 66 people participating in the Prolanis program and Bangsal Community Health Center itself was in the top 6 with the highest number of Diabetes Mellitus cases in Mojokerto Regency (Dinkes Kabupaten Mojokerto, 2024). Anxiety, stress, sadness, fear, worry, hopelessness, and helplessness are mental health symptoms that may occur in individuals (Nugroho et al., 2024). Emotional distress related to diabetes can also result from personal concerns about health management, family support, emotional stress, and accessibility of care (Rahmi et al., 2020). This can influence self-care behaviors (Putra Widayati, & Sutawardana, 2017). Self-care plays a crucial role in improving the well-being and quality of life of people with the disease. Proper self-care practices can control blood sugar levels in people with diabetes mellitus, improving their quality of life (Sry wahyuni, Amelia, & Zulita, 2021).

## METHOD

This study design uses a cohort approach using retrospective data, which examines how risk and impact aspects interact through observation or data collection at one point in time (point-in-time approach). The population in this study were all diabetes mellitus patients who participated in the prolanis program at the Bangsal Community Health Center UPT, totaling 66 people. The sampling technique used was total sampling. The independent variable was Diabetes Distress and the dependent variable was self-care. The instruments in this study used the DDS (Diabetes Distress Scale) questionnaire consisting of 17 questions and the SDSCA (Summary of Diabetes Self-Care Activities) questionnaire consisting of 13 questions.

## RESULTS

N o.	Responden t	Frekuensi	Presentase (%)
<b>Characteristics</b>			
<b>1. Age</b>			
45-54 year	18	27.3	
55-59 year	27	40.9	
>60 year	21	31.8	
<b>Total</b>	<b>66</b>	<b>100</b>	
<b>2. Gender</b>			
Male	3	4.5	
Female	63	95.5	
<b>Total</b>	<b>66</b>	<b>100</b>	
<b>3. Long Suffering</b>			
3-12 Months	11	16.7	
<5 years	44	66.7	
≥5 years	11	16.7	
<b>Total</b>	<b>66</b>	<b>100</b>	
<b>4. Comorbid Diseases</b>			
Hypertension	25	37.9	
Blindness	0	0.0	
Strokes	2	3.0	
Etc	39	59.1	
<b>Total</b>	<b>66</b>	<b>100</b>	

Based on Table 1, the distribution of results is as follows: The age of the respondents was mostly between 55-59 years (40.9% or 27 people), on average women were the most dominant to have diabetes with a total of 63 respondents (95.5%) and the duration of suffering from diabetes mellitus was mostly <5 years (66.7% or 44 people) and the majority of sufferers had comorbidities such as hypertension (25 respondents or 37.9%).

**Table 2 Relationship between Diabetes Distress and Self-Care in Diabetes**

Diabetes Distress	Self Care				Total
	f	%	f	%	
<b>Light</b>	3	4.5	2	39.	2
			6	4	9
<b>Medium</b>	2	33.3	1	15.	3
	2		0	2	2
<b>Heavy</b>	5	7.6	0	0.0	5
<b>Total</b>	3	45.5	3	54.	6
	0		6	5	6
<b>Hasil Statistik</b>	<b>Uji e:</b>	<b>Pvalu 0,000</b>	<b><math>\alpha: &lt;0.05</math></b>	<b>r: -0.644</b>	<b>-</b>

### Mellitus Patients

Based on table 2 above, the results obtained that respondents who have severe diabetes distress amounted to 5 respondents (7.6%), while 29 respondents (43.9%) showed mild diabetes distress results with 3 respondents (4.5%) having poor self-care and 26 others (39.4%) having good self-care. While 32 respondents (48.5%) showed moderate diabetes distress results with 22 respondents (33.3%) having poor self-care and 10 other respondents (15.2%) having good self-care. Based on the Spearman Rho statistical test, a significance value of 0.000 ( $p$  value  $<0.05$ ) was obtained which can be interpreted that  $H_a$  is accepted and  $H_0$  is rejected, which means there is a relationship between Diabetes Distress and Self-Care with a correlation coefficient value ( $r = -0.644$ ) which can be concluded that the closeness of the correlation results is strong with a negative direction which can be interpreted that the lighter the diabetes distress, the better the self-care.

## DISCUSSION

### 1. Diabetes Distress in Diabetes Mellitus Patients at the Bangsal Community Health Center

Table 2 shows that the majority of respondents experienced moderate diabetes distress, with 32 respondents (48.5%), of whom 25 had suffered for less than 5 years. Diabetes distress is an emotional state often experienced by people with diabetes mellitus, encompassing feelings of anxiety, frustration, hopelessness, and mental exhaustion resulting from disease management. Factors contributing to distress include biological, genetic, and psychosocial factors. Distress can be a trigger for inward aggression. When individuals with distress realize they are not living up to their ideals, it can lead to despair (Malini et al., 2019). Newly diagnosed patients (less than 5 years) may experience high levels of distress due to concerns about managing diabetes. These individuals may experience anxiety related to the changes they must make in their lives and the impact of diabetes on their quality of life. Patients who have suffered from diabetes for a long time ( $>5$  years) often experience more complex distress, diabetes sufferers may have faced various complications and feel emotionally exhausted from the long-term process of managing the disease (Maulidta 2018).

### 2. Self-Care in Diabetes Mellitus Patients at Bangsal Community Health Center

Table 2 shows that of the 66 respondents, 36 (54.5%) had good self-care. Self-care is a series of actions and behaviors undertaken by individuals with diabetes to effectively manage their condition and control stress or distress. It encompasses various aspects aimed at maintaining health, preventing complications, and improving overall quality of life. Diabetes self-care involves understanding the disease, managing symptoms, and implementing appropriate strategies in daily life (Uly & Fadli, 2023). Self-care among diabetes mellitus patients at Bangsal Community Health Center was categorized as good by 36 respondents (54.5%) of the 66.

Nearly half of these respondents had poor self-care. This is because self-care can be influenced by gender and duration of the disease. These conditions need to be addressed to improve self-care. Self-care for distress refers to a series of positive actions taken by individuals to manage their physical and mental health. These actions aim to reduce the anxiety, frustration, and hopelessness often experienced by people with diabetes. Patients who practice good self-care tend to be more proactive in regularly monitoring their blood sugar levels, so they can understand how food and physical activity affect their condition. By doing so, they can make more informed decisions about diet and medication, which can ultimately help maintain blood sugar levels within a healthy range (Colberg et al., 2016).

### 3. The Relationship between Diabetes Distress and Self-Care in Patients with Diabetes Mellitus

Table 2 shows that 29 respondents (43.9%) experienced mild distress, 32 respondents (48.5%) experienced moderate distress, and 5 respondents (7.6%) experienced severe distress. Thirty (45.5%) respondents experienced poor self-care, while 36 (54.5%) experienced good self-care. The Spearman's Rho test yielded a p-value of 0.000 with an  $\alpha$  of  $<0.05$ , indicating that H1 is accepted, indicating a relationship between diabetes distress and self-care in patients with diabetes mellitus. The resulting correlation coefficient ( $r$ ) was -0.644, indicating a strong negative correlation. This suggests that the milder the diabetes distress, the better the self-care. Effective management of diabetes distress can positively contribute to self-care. Patients facing mild distress generally demonstrate better self-care compared to those facing severe distress, who exhibit poor or inadequate self-care. Furthermore, respondents with severe distress are 1.8 times more likely to neglect proper self-care (Natalansyah, Wulandari, and Mansyah, 2020). Diabetes distress is thought to negatively

impact the health and well-being of those affected, affecting their morale, emotions, and motivation to manage care, treatment, and monitoring. Consequently, it can lead to undesirable outcomes such as uncontrolled blood sugar levels, negative emotions, fatigue, and feelings of overwhelm, which can complicate or hinder the patient's treatment journey. Individuals, both healthy and ill, have a variety of self-care needs throughout their life cycle to promote or maintain a state of balance; these include needs for air, water, nutrition, waste disposal, rest, socialization, and coping with life-threatening dangers. For individuals with diabetes mellitus, essential self-care needs to maintain and improve their health include diet management, physical activity, blood sugar monitoring, consistent medication intake, and foot care. (Ismiyanti and Fadillah 2022).

## CONCLUSIONS

The conclusion of the study is that there is a relationship between diabetes distress and self-care in diabetes mellitus patients at the Bangsal Community Health Center UPT, which is proven by the results of the Spearman rho statistical test showing a strong relationship with a negative or non-unidirectional direction. Thus, it can be concluded that the lighter the diabetes distress, the better the self-care in diabetes mellitus patients.

## REFERENCES

Asiva, Noor, & Rachmayani. (2019). *Profil Kesehatan Provinsi Jawa Timur*. 6.

Chukwuemeka et al. (2020). *Health Lifestyle and Self-Esteem as Correlates of Diabetes Distress among University Employees : Implication for Thriving at Work*. *Health Lifestyle and Self-Esteem as Correlates of Diabetes Distress among*. October. <https://doi.org/10.5829/idosi.wjms.2017.69.76>

Colberg, S. R., Sigal, R. J., Yardley, J. E., Riddell, M. C., Dunstan, D. W., Dempsey, P. C., Horton, E. S.,

Castorino, K., & Tate, D. F. (2016). Physical activity/exercise and diabetes: A position statement of the American Diabetes Association. *Diabetes Care*, 39(11), 2065–2079. <https://doi.org/10.2337/dc16-1728>

Dinkes Kabupaten Mojokerto. (2024).

Malini, H., Waluyo, A., Lenggogeni, D. P., Febri, B. K., & Roberto, M. (2019). *Manajemen Diabetes Distress*.

Natalansyah, N., Wulandari, W., & Mansyah, B. (2020). Tingkat Stres Dan Perawatan Diri (Self-Care) Pada Klien Diabetes Melitus Tipe 2 Di Poli Penyakit Dalam BLUD RSUD Dr. Doris Sylvanus. *Jurnal Surya Medika*, 6(1), 91–95. <https://doi.org/10.33084/jsm.v6i1.1623>

Nugroho, F. C., Banase, E. F. T., Hamu, A. H., Making, M. A., Vanchapo, A. R., Nubi, L. B., & Banggut, E. D. (2024). Hubungan antara Diabetes Distress dengan Self-Care Pasien Diabetes Mellitus Tipe II Puskesmas Oesapa Kota Kupang. *Jurnal Ners Universitas Pahlawan*, 8(1), 658–666. <http://journal.universitaspahlawan.ac.id/index.php/ners>

Putra, A. J. P., Widayati, N., & Sutawardana, J. H. (2017). Hubungan Diabetes Distress dengan Perilaku Perawatan Diri pada Penyandang Diabetes Melitus Tipe 2 di Wilayah Kerja Puskesmas Rambipuji Kabupaten Jember. *E-Jurnal Pustaka Kesehatan*, 5(1), 185–192. <https://jurnal.unej.ac.id/index.php/JPK/article/view/5773>

Rahmi, H., Malini, H., & Huriani, E. (2020). Peran Dukungan Keluarga Dalam Menurunkan Diabetes Distress Pada Pasien Diabetes Mellitus Tipe II. *Jurnal Kesehatan Andalas*, 8(4), 127–133. <https://doi.org/10.25077/jka.v8i4.1129>

Sry wahyuni, A., Amelia, D., & Zulita, O. (2021). Analisa Diabetic Self Care Menggunakan Summary of Diabetes Self Care Activities (SDSCA) Pada Penderita Diabetes Melitus. *REAL in Nursing Journal*, 4, 148. <https://doi.org/10.32883/rnj.v4i3.1487>

Uly, & Fadli. (2023). Relationship between Self-Care Behavior and Diabetes Self-Management Education in Patients with Diabetes Mellitus Type 2. *Open Access Macedonian Journal of Medical Sciences*, 10(E), 1648–1651. <https://doi.org/10.3889/oamjms.2022.10879>

Webber, S. (2021). *International Diabetes Federation. Diabetes Research and Clinical Practice*. (Vol. 102). <https://doi.org/https://doi.org/10.1016/j.diabres.2013.10.013>