Family Support And Emotional Distress On Self-Care Behavior In Patients With Diabetes Mellitus At Puskesmas Gamping 1 Sleman

By sitti nur djannah

WORD COUNT 4166
TIME SUBMITTED 09-OCT-2023 02:47PM
PAPER ID 103336870

Indonesian Journal for Health Sciences
Vol. 7, No. 2, September 2023, pp. 14-21
ISSN 2549-2721 (Print), ISSN 2549-2748 (Online)

FAMILY SUPPORT AND EMOTIONAL DISTRESS ON SELF-CARE BEHAVIOR IN PATIENTS WITH DIABETES MELLITUS AT PUSKESMAS GAMPING 1 SLEMAN

Mahardika Primadani[1*], Esti Kurniasih[1], Surahma Asti Mulasari[1], Sitti Nur Djannah[1], Nurul Kodriati[1]
[1]Master of Public Health Study Program, Ahmad Dahlan University, Yogyakarta, Indonesia

Article History:
Submitted:26/01/2023
Accepted:23/08/2023
Published:20/09/2023

Keywords:
Family Support,
Emotional Distress,
Self care,
Diabetes mellitus

ABSTRAK

Abstract:
Diabetes mellitus (DM) is a chronic disease caused by genetic factors and an unhealthy lifestyle. The emotional state of a person diagnosed with DM is also very influential on treatment and self-care. To prevent chronic complications, it is necessary to control DM, one of which is self-care for DM patients. The purpose of this study was to determine the relationship between family support and emotional distress on self-care behavior in DM sufferers at the Gamping 1 Health Center in Sleman. The design used in this study is analytic observational with a cross sectional approach. Samples were taken by random sampling of 30 DM patients who participated in PROLANIS activities at the Gamping 1 Health Center in Sleman. Data analysis used the Spearman test. The results showed that there was a significant relationship between family support and emotional distress on self-care behavior in DM patients with a p value of 0.023 <0.05 and a correlation coefficient (R = 0.413). This means that the higher the family support, the higher DM sufferers are in carrying out self-care behavior. Likewise with the emotional distress variable with a p value of 0.028 <0.05 and a correlation coefficient (R = -0.191). This means that the higher the emotional distress of DM sufferers, the lower DM sufferers are in carrying out self-care behavior.

***Abstrak*:**
Diabetes mellitus (DM) adalah penyakit kronis yang disebabkan oleh faktor genetik dan gaya hidup yang tidak sehat. Keadaan emosional seseorang yang didiagnosis DM juga sangat berpengaruh pada pengobatan dan perawatan diri. Untuk mencegah komplikasi kronis, perlu dilakukan pengendalian DM, salah satunya adalah perawatan diri bagi pasien DM. Tujuan dari penelitian ini adalah untuk mengetahui hubungan antara dukungan keluarga dan tekanan emosional terhadap perilaku perawatan diri pada penderita DM di Puskesmas Gamping 1 di Sleman. Desain yang digunakan dalam penelitian ini adalah observasional analitik dengan pendekatan cross sectional. Sampel diambil dengan random sampling sebanyak 30 pasien DM yang mengikuti kegiatan PROLANIS di Puskesmas Gamping 1 di Sleman. Analisis data menggunakan uji Spearman. Hasil penelitian menunjukkan bahwa terdapat hubungan yang signifikan antara dukungan keluarga dengan emotional distress terhadap perilaku self-care pada pasien DM dengan p value sebesar 0,023 <0,05 dan koefisien korelasi (R=0,413). Artinya, semakin tinggi dukungan keluarga, semakin tinggi penderita DM dalam menjalankan perilaku self-care. Begitu juga dengan variabel emotional distress dengan nilai p sebesar 0,028 <0,05 dan koefisien korelasi (R=-0,191). Artinya semakin tinggi tekanan emosional penderita DM, semakin rendah penderita DM dalam melakukan perilaku self-care.

Corresponding Author:
Mahardika Primadani
Master of Public Health Study Program, Ahmad Dahlan University,
Yogyakarta, Indonesia.
Email: mahardikaprimadani988@gmail.com

How to Cite:
M. Primadani, E. Kurniasih, S.A. Mulasari, S.N. Djannah, N. Kodriati, "Family Support and Emotional Distress on Self-care Behavior in Patients with Diabetes Mellitus at Puskesmas Gamping 1 Sleman ", Indonesia. J. Heal. Sci., vol. 7, no. 2, pp. 14-21, 2023.

INTRODUCTION

Diabetes Mellitus (DM) is a chronic disease which is currently a serious health problem and can cause death worldwide. DM or commonly called diabetes is a chronic disease, where this disease will be suffered for life. This is influenced by disturbances in the metabolism of carbohydrates, proteins, and fats also caused by genetic factors, unhealthy lifestyles, and environmental influences [1].

DM is one of the main non-communicable diseases (PTM) in society. The International Diabetes Federation (IDF) stated that in 2019 there were 463 million people aged 20-79 years in the world suffering from DM with a prevalence of 9.3%. The IDF estimates that the prevalence of DM by sex in 2019 is 9% for women and 9.65% for men. The prevalence of DM is expected to increase by 19.9% or 111.2 million people aged 65-79 years with increasing age of the world's population. In 2030 this figure is expected to continue to increase to reach 578 million and 700 million in 2045. The IDF states that there are 10 countries with the highest number of DM sufferers in the world who are in the age range of 20-79 years, namely: China 116.4 million sufferers, India 77 million sufferers, the United States 31 million sufferers, these three countries are ranked in the top 3 for 2019. Indonesia ranks 7th out of 10 countries with 10.7 million sufferers [2].

The prevalence of DM in Indonesia diagnosed by a doctor in 2013 was 1.5% and increased in 2018 to 2% [3]. The highest incidence of DM was occupied by DKI Jakarta province with a prevalence of 2.6% in 2018. The Special Region of Yogyakarta (DIY) was in second place with a prevalence of 2.4% of sufferers of all ages in 2018. The incidence of DM in DIY was recorded at 12,525 cases in 2018 with the highest DM prevalence in urban areas, reaching 1.9% [4].

DM is a chronic disease. Chronically ill patients must take care of themselves in the long term [5]. Self-care for DM patients is an important part that needs to be done to prevent complications [6]. To prevent chronic complications, it is necessary to control DM. Aspects of prevention, self-care, and family support for DM sufferers are currently a major concern and need to be developed [6]. Self-care can be defined as learned behaviors and actions or responses to needs. In addition, self-care behavior is a way or action to develop knowledge or awareness to learn to survive the complexity of DM problems [7]. The level of productivity of DM sufferers is greatly influenced by the treatment of the disease. If the treatment is carried out comprehensively, the quality of life for DM sufferers can remain optimal [8].

The emotional state of people who suffer from DM is also very influential on treatment and self-care [9]. DM patients who are stressed will affect blood sugar levels. If blood sugar increases, it will have an impact on complications that affect the physical condition of DM sufferers, medical costs and administration. Therefore efforts to control stress should be done by doing physical activity on a regular basis [10].

Lack of family support also causes DM sufferers to lack activity, greater emotional stress, and unhealthy eating habits. At a psychological level, stress can cause negative feelings towards oneself in the form of rejection, anxiety, feelings of inadequacy and helplessness. Mentally this can affect perception and ability to solve problems [11].

The results of a preliminary study that was conducted in September 2022 at the Gamping 1 Health Center showed that the incidence of DM in 2021 at all ages was recorded at 2,078 patients and in 2022 showed a decrease recorded until August 2022 to 1,779 patients at all ages. DM cases at the Gamping 1 Health Center were dominated by non-insulin dependent DM cases [12]. From the profile data of the Sleman Health Office in 2019, only 52.5% of DM sufferers received health services according to standards [13].

DM sufferers must be disciplined in carrying out their treatment, so they need someone to support and listen to their complaints. Encouragement and motivation

will help to deal with everyday stressful behavior [14]. Emotional support from loved ones is very important for DM sufferers, which is expected to increase their confidence in undergoing treatment [15]. This emotional support can come from family members who care for DM sufferers, including parents, children and siblings [16]. Family support is family assistance to provide physical and emotional comfort in stressful situations. Available support is believed to reduce stress in DM patients [17].

Based on the description above, the research is interested in knowing whether there is a relationship between family support and emotional distress on self-care behavior in DM sufferers at the Gamping 1 Health Center in Sleman.

RESEARCH METHOD

The design used in this study was analytic observational, namely to examine the relationship between family support and emotional distress on the self-care behavior of DM sufferers. The approach used in this study is a cross sectional approach. The population in this study were DM patients undergoing treatment at the Gamping 1 Health Center in Sleman as many as 2,078 patients [12]. Samples were taken by random sampling of 30 DM patients who participated in PROLANIS activities at the Gamping 1 Health Center in Sleman. There are several reasons for using only 30 samples, namely as stated by Gay in Mahmud (2011) who argues that the minimum acceptable sample size based on the correlational descriptive research method is a minimum of 30 subjects. This is in line with Baley in Mahmud (2011) which states that for research that uses statistical data analysis, the minimum sample size is 30 respondents.

The independent variables in this study are family support and emotional distress, while the dependent variable is self-care behavior. Data was collected using a family support questionnaire adopted from the Hennsarling Diabetes Family Support Scale (HDFSS) questionnaire, the emotional distress questionnaire was adopted from the Diabetes Distress Scale (DDS) questionnaire compiled by Polonsky et al (2015), and the self-care questionnaire was adopted from the Summary of Diabetes Self-Care Activity (SDSCA) questionnaire developed by Toobert, Hampson, and Glasgow (2000). Explanations were given to prospective respondents, if they were willing to become respondent they were welcome to sign an informed consent. The ethical approval for this research was issued by the KEP of Ahmad Dahlan University with Number: 012301011. After all the data was collected, the data was analyzed using a computer program.

RESULTS AND ANALYSIS

RESULT

Characteristics of Respondents

Table 1.
Distribution of Respondent Characteristics

Characteristics	Frequency (f)	Percentage (%)
Gender		
Man	8	27
Woman	22	73
Age (Years)		
<40 years	7	23
>40 years	23	77
Suffering from DM for a long time		
1-5 years	14	47
6-10 years	9	30
>10 years	7	23

The results of the analysis in table 1. The distribution of the characteristics of respondents according to gender in this study was dominated by 22 female respondents (73%). Based on the age characteristics, most of the respondents were aged > 40 years as many as 23 people (77%). The distribution of respondents based on the length of time they had DM showed that the most respondents had DM in the range of 1-5 years, with 14 people (47%).

1. Univariate Analysis

Family support research data is assessed by 2 categories, namely low family support with a score of <36 (mean value), high family support with a score of ≥36.

Likewise, the emotional distress variable is assessed in 2 categories, namely low emotional distress with a score of <45 (mean value) and high emotional distress with a score of ≥45 Data penelitian dukungan keluarga [18].

Table 2.
Frequency Distribution of Family Support and Emotional Distress

Category	Frequency (f)	Percentage (%)
Family support		
Low <36	12	40
Height ≥36	18	60
Emotional distress		
Low <45	10	33
Height ≥45	20	67
Self care		
Low <45	11	37
Height ≥45	19	63

Table 2 shows 12 respondents (40%) who received low family support, and 18 respondents (60%) had high family support. Respondents experienced low distress behavior by 10 respondents (33%), while high distress behavior was 20 respondents (67%). Respondents who had low self-care were 11 respondents (37%) and respondents who had high self-care were 19 respondents (63%).

2. Bivariate Analysis

Relationship between family support and emotional distress on self-care behavior in DM patients

Table 3.
Correlation test results

Variable	Self Care Behavior	
Family support	R	0,413
	P value	0,023
	Correlation direction	+ (positive)
Emotional distress	R	-0,191
	P value	0,028
	Correlation direction	-(negative)

The correlation test used to determine the relationship between family support and emotional distress on self-care behavior in DM sufferers at the Gamping 1 Health Center in Sleman uses the Spearman Correlation Test. The significance value for the correlation of family support with self-care behavior is p = 0.023 so it can be concluded that there is a significant relationship between family support and self-care behavior. Likewise for the emotional distress variable with self-care behavior p=0.028 so it can be concluded that there is a significant relationship between emotional distress and self-care behavior in DM sufferers at the Gamping 1 Health Center in Sleman.

The correlation coefficient (R = 0.413) in the test of family support and self-care behavior has a positive direction with a strong correlation. This means that the higher the family support, the higher the DM sufferer is in carrying out self-care behavior. The correlation coefficient (R = -0.191) on the emotional distress test and self-care behavior has a negative direction with weak correlation strength. This means that the emotional distress of DM sufferers is high, the lower DM sufferers are in carrying out self-care behaviors.

DISCUSSION

Characteristics of Respondents

The results of a study conducted at the Gamping 1 Health Center in Sleman on 30 DM patients who participated in PROLANIS activities showed that more than 50% of DM patients were female compared to males with a total of 22 people (73%). The results of this study are comparable to statistical data from Riskesdas in 2018 showing that the prevalence of DM is more common in women than men [3].

The age characteristics show that the average age of DM sufferers is >40 years old. Based on the results of this study, it is in line with the concept of DM where over the age of 45 years, pancreatic function will decrease in producing insulin [19]. The average length of time DM patients suffer

from DM is 7 years. Patients with DM for more than 10 years have good self-care practices [20].

Relationship between family support and self-care behavior in people with DM

The results of research conducted at the Gamping 1 Health Center in Sleman found high family support with a total of 18 people (60%) and 12 people (40%) who had low family support. These results are supported by other studies where it was found that most respondents received high family support with a total of 21 people out of 22 respondents (95.45%) and only 1 person (4.55%) had low family support [21].

This study shows a significant relationship between family support and self-care behavior and has a positive direction with a strong correlation. This is evidenced by the p value = 0.023 with a correlation coefficient (R = 0.413), which means that the higher the family support, the higher the DM sufferer is in carrying out self-care behavior.

This research is in line with research conducted by Putri and Bachri, (2016) which stated that there was a statistically significant relationship (p value 0.017 <0.05) between family support and self-care behavior in diabetic ulcer patients. The results of this study indicate that there is a relationship between each indicator on family support and the patient's self-care [22].

This research is also in line with research conducted by Sudarman (2020) which states that family support greatly influences self-care behavior in people with DM. The higher the family support obtained by DM patients, the more obedient DM patients are in carrying out self-care [14].

In contrast to Prasetyani, (2016) who found that there was no significant relationship between family support and self-care behavior (p = 0.290 <0.05), the patient's ability to self-care behavior was still very low, namely the average diabetes self-care was only 2 .5 days in 1 week, family support for patients is also low (41.7%). The closeness of a strong relationship occurs because the relationship between family support and self-care behavior is not direct. Family support is a mediating variable between self-efficacy, motivation, depression and self-care behavior. Family support shapes self-efficacy and motivation and reduces depression. Meanwhile, self-efficacy, motivation and depression are directly related to self-care behavior activities [23].

Family support is a source of behavior change in self-care. The family is one of the members who can support DM patients to carry out care independently [24]. This is in line with other research which states that self-care is one way to deal with DM. In self-care, DM patients also need positive family support to influence good outcomes [25].

Family support has a significant relationship with self-care behavior in DM patients, with interventions that focus on increasing support from family and self-care will be more effective in improving blood sugar control [26]. In addition, the motivation of loved ones such as families who live at home with DM sufferers will have an impact on increasing awareness of DM sufferers in carrying out self-care activities [27].

The Relationship between Emotional Distress and Self-Care Behavior in DM Sufferers

Diabetes distress describes the emotional stress caused by stress in DM self-care and the complications that occur [28]. This emotional burden has an impact on patients, families and health workers who are involved in DM care. DM complications cause a decrease in quality of life related to physical, psychological, social and environmental health [29]. Distress in people with DM is influenced by knowledge, length of illness, personality and economic factors [30].

As many as 67% or about 20 respondents in this study experienced diabetes distress. This shows that DM is a chronic disease that has a significant impact on the level of stress experienced by DM sufferers. The demands of life that require

DM sufferers to change their lifestyle, ranging from dietary restrictions, exercise, regular medication, to controlling blood sugar. These changes will cause negative psychological reactions such as anger, fear, and stress [31].

Based on the results of the study, it was found that around 37% or 11 respondents who had low self-care had diabetes distress. Statistical test results showed p value = 0.028 with a correlation coefficient (R = -0.191). This shows that there is a relationship between diabetes distress and self-care behavior. The higher the emotional distress of DM sufferers, the lower DM sufferers are in carrying out self-care behaviors. Stress has an effect on self-care. The effects of stress itself can affect a person's ability to manage diabetes properly, thereby affecting blood sugar control and psychology [32].

This is also reinforced through research conducted by Putra (2017) which explains that emotional problems in DM patients have a significant impact on worsening quality of life, poor self-care and poor blood sugar control [31].

DM has psychological and physiological effects. Psychologically, stress is in the form of rejection, fear, feelings of helplessness, and negative stigma towards disease [11]. Stress is a psychosocial problem that can cause a decrease in mental and physical function, causing DM sufferers to lose motivation to take care of themselves, causing poor blood sugar control and the risk of further complications [30].

CONCLUSION

There is a significant relationship between family support and self-care behavior in DM sufferers at the Gamping 1 Sleman Public Health Center with a p value of 0.023 and a correlation coefficient value (R = 0.413). There is a significant relationship between emotional distress and self-care behavior in DM sufferers at the Gamping 1 Health Center in Sleman with a p value of 0.028 with a correlation coefficient (R = -0.191).

Intervention is needed not only for DM sufferers, but also to educate family members that family support has a significant impact on self-care behavior in DM sufferers. If DM sufferers get support from their families, it is hoped that DM sufferers can better deal with the stress of treatment.

ACKNOWLEDGMENT

The researcher would like to thank those who have helped in this research process, especially Ahmad Dahlan University Yogyakarta and the Gamping 1 Public Health Center which has supported this research at the time of data collection

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