

SELF-MANAGEMENT IN TYPE II DIABETES MELLITUS PATIENTS

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ABSTRACT

Introduction

Self-management is not an easy thing to do, it requires good or high knowledge, support, and self-confidence that comes from within. Activities that must be carried out by diabetes mellitus patients include regulating diet, using diabetes medication, checking or monitoring blood sugar levels, doing physical activities or sports, and doing good foot care

Method

This study aims to determine the factors related to Self-Management in Type II Diabetes Mellitus Patients in Pauh Timur Village The service area of Pariaman Health Center Year 2024.

Result

The results of the study showed that most respondents, namely 25 (72.8%) were in the age range of 45-59 years. More than half of the respondents, namely 19 (57.6%) had high knowledge. More than half of the respondents, namely 22 (66.7%) had high support. More than half of the respondents, namely 23 (69.7%) have high self-efficacy. More than half of the respondents, namely 22 (66.7%) have self-management in the good category. The conclusion is that there is a significant relationship between age, knowledge, family support and self-efficacy with Self Management in patients with type 2 diabetes mellitus in Pauh Timur Village in 2024

Conclusion

Suggestions in the study are expected that respondents can educate care management to be carried out independently and regularly by DM sufferers so that it can reduce the prevalence of type 2 diabetes mellitus in Pauh Timur Village The service area of Pariaman Health Center Year 2024.

INTRODUCTION

Chronic diseases are a very serious health problem and can cause the greatest number of deaths worldwide, one of which is diabetes mellitus (DM), where diabetes mellitus is one of the diseases that arise from poor behavior and a bad lifestyle. Diabetes Mellitus (DM) is a disease that occurs due to excess sugar in the blood so that sufferers are unable to use insulin effectively or cannot produce sufficient amounts of insulin. In the last three decades, the prevalence of type 2 diabetes has increased drastically (Kurniawati & Budiarto, 2022).

The high incidence of diabetes can increase complications, based on Yoga's research in Widiarti, (2022) patients with diabetes mellitus have the highest hospitalization rate and an increased risk of harm and even death due to complications of diabetes mellitus such as stroke, blindness and amputation due to gangrene. To prevent complications from diabetes mellitus, it is necessary to control diabetes mellitus, including education, dietary restrictions through Medical Nutrition Therapy (TPM), medication regimens, and increased physical activity/physical exercise. The results obtained show that regular exercise/physical exercise has a significant effect on the success of managing type 2 diabetes mellitus, so that the factor that influences the success of managing type 2 diabetes mellitus is exercise by 40%. The above research can be understood that physical exercise is very important for type 2 diabetes mellitus patients.

Diabetes is a disease caused by the accumulation of glucose in the blood and occurs because the body does not produce enough insulin, or cannot use insulin properly, which is characterized by typical symptoms, namely continuous urination (in large amounts)

with a sweet taste (diabetes) (Maulina et al., 2022).

Self-management is the primary behavior and action taken by each individual to control diabetes mellitus, including treatment and prevention of complications (Mulya & Kosassy, 2020). Effective self-management can help control blood sugar levels in people with diabetes mellitus. Regular self-management practices can help maintain normal blood sugar levels, preventing complications from diabetes mellitus (Srywahyuni et al., 2021).

Based on data from the Pariaman Health Office in 2024 from 7 existing Community Health Centers, Pauh Timur Village is the first in the ranking of DM sufferers with 527 people. Of the 527 sufferers in the Pauh Timur Village/Sub-district. Pauh Timur Village has the highest ranking of DM sufferers, namely 33 people, second in Kampung Perak Village with 31 people, Kampung Pondok Village with 30 people, then Pauh Barat Village with 16 people. The results of interviews with 10 people in the [auh Timur Village on March 10, 2024 showed that 2 DM patients had good self-management with controlled blood sugar levels, 6 DM patients had poor self-management and uncontrolled blood sugar levels, 2 other patients were inconsistent in maintaining good self-management.

Based on the description of the background above, the researcher formulated the problem in this study as follows: Is there a relationship between age factors, knowledge, family support and self-efficacy with self-management of type II diabetes mellitus in Pauh Timur Village, Pariaman Health Center Working Area in 2024??

The specific objectives of this study are:

To determine the frequency distribution of age and self-management among type 2

diabetes mellitus patients in Pauh Timur Village, Pariaman Community Health Center Work Area in 2024.

To determine the frequency distribution of knowledge and self-management among type 2 diabetes mellitus patients in Pauh Timur Village, Pariaman Community Health Center Work Area in 2024.

To determine the frequency distribution of family support and self-management among type 2 diabetes mellitus patients in Pauh Timur Village, Pariaman Community Health Center Work Area in 2024.

To determine the frequency distribution of self-efficacy and self-management among type 2 diabetes mellitus patients in Pauh Timur Village, Pariaman Community Health Center Work Area in 2024.

To determine the relationship between age and self-management among type 2 diabetes mellitus patients in Pauh Timur Village, Pariaman Community Health Center Work Area in 2024.

To determine the relationship between knowledge and self-management among type 2 diabetes mellitus patients in Pauh Timur Village, Pariaman Community Health Center Work Area in 2024. Pariaman Community Health Center in 2024.

To determine the relationship between family support and self-management in type 2 diabetes mellitus patients in Pauh Timur Village, Pariaman Community Health Center Work Area in 2024.

To determine the relationship between self-efficacy and self-management in type 2 diabetes mellitus patients in Pauh Timur Village, Pariaman Community Health Center Work Area in 2024.

METHOD

In the context of self-management in type II diabetes mellitus patients, the formulation of the problems, issues, challenges, and factual and actual needs faced by patients can be described as follows:

Treatment Adherence

Many type II diabetes patients experience difficulty adhering to the correct medication schedule, including the use of insulin or oral medications prescribed by their doctor. This is often due to a lack of awareness of the importance of regular medication or discomfort experienced due to medication side effects.

Unhealthy Eating Habits

Type II diabetes patients often struggle to manage their diets effectively. Eating habits high in carbohydrates, sugar, and saturated fat are often difficult to change, even though patients understand that poor diets can worsen their health.

Lack of Physical Activity

Type II diabetes patients often lack physical activity, which affects their blood sugar control. Many factors prevent patients from exercising regularly, including lack of motivation, physical pain, or busy daily routines.

Infrequent Blood Sugar Monitoring

Regular blood sugar monitoring is crucial for diabetes management, yet many patients do not routinely check their blood sugar levels at home. This can lead to suboptimal management of their disease.

RESULT

Charateristic of Responden

1. Gender

Tabel 1

Frequency Distribution of Respondent Characteristics Based on Gender in Pauh Timur Village, Pariaman Health Center Working Area in 2024 (n=33)

Jenis Kelamin	f	%
Female	2	72.7
Male	9	27.3
Total	3	100.0

2. Education

Tabel 2

Frequency Distribution of Respondent Characteristics Based on Education in Pauh Timur Village, Pariaman Health Center Working Area in 2024 (n=33)

Education	f	%
SMP/SLTP	1	36.4
SMA/SLT	1	51.4
A	7	
University	4	12.1
Total	3	100

3. Occupation

Tabel 3

Frequency Distribution of Respondent Characteristics based on occupation in Pauh

Timur Village, Pariaman Community Health Center Working Area in 2024 (n=33)

Occupation	f	%
IRT	15	45.5
Fisherman	1	3.0
Swasta	13	39.4
Pegawai (PNS, Swasta)	4	12.1
Total	33	100.0

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1. Age

Tabel 4

Frequency Distribution of Respondents' Ages in Pauh Timur Village, Pariaman Community Health Center Working Area in 2024 (n=33)

Age	f	%
19-44 age (mature)	4	12.1
45-59 age (pra lansia)	25	75.8
60-70 age (advance)	4	12.1
Total	33	100

2. Kowladge

Tabel 5

Frequency Distribution of Knowledge in Pauh Timur Village, Pariaman Health Center Working Area in 2024 (n=33)

knowledge	f	%
High	19	57.6
Low	14	42.4
Total	33	100.0

3. Family suport

Tabel 6

Frequency Distribution of Respondents' Family Support in Pauh Timur Village, Pariaman Community Health Center Working Area in 2024 (n=33)

Family suport	f	%
High	22	66.7
Low	11	33.3

Total	33	100.0
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Analisa Bivariat**Tabel 7**

The relationship between age and self-management in Pauh Timur Village, Pariaman Community Health Center Working Area in 2024 (n=33)

Age	Self Manajemen				Total	
	Good		Less			
	<i>f</i>	%	<i>f</i>	%	N	%
19-44 age	4	100	0	0	4	100
45-59 age	17	68	8	32	25	100
60-70 age	1	25	3	75	4	100
		.0		0		0
Total	22	66	11	33	33	100
	2	.7	1	3		0

Based on table 7, it can be seen that the percentage of respondents with good self-management is more common in respondents aged 44-59 years (pre-elderly period), namely 17 (68%) compared to respondents aged 19-44 years (adulthood), 4 (100%). The results of statistical tests using cross tabulation cannot use the chi-square because there is one table with a value of "0" and 4 cells with an expected count of less than 5, so cell merging is carried out. The merging can be seen in table 7.1.

Tabel 8.1

The relationship between age and self-management in Pauh Timur Village, Pariaman Community Health Center Working Area, age 2024 (n=33)

Age	Self manajemen						p
	Good		Less		Total		
	f	%	f	%	N	%	
19-59 age	2	72.	8	27.	2	10	
(Pralnsia)	1	4		6	9	0	0

60-70 age (lansia)	1	25	3	75	4	10
		0		0		0

Total	2	66	1	33	3	10
	2	7	1	3	3	0

Based on table 8.1, it can be seen that the Adult Age category was combined with Pre-Elderly for reasons of poor self-management, it was found that the percentage of respondents with good self-management was more found in respondents aged 19-59 (Adult/pre-elderly) namely 21 (72.4%) compared to respondents who had poor Self-Management 19-59 age (adult/pre-elderly) namely 8 (27.6%). The results of statistical tests using 2x2 cross tabulation using Fisher's Exact Test obtained a p value = 0.097 (p value 0.05 < α 0.097) so it can be concluded, There is no significant relationship between age and self-management in Diabetes Mellitus patients in Pauh Timur Village, Pariaman Health Center Working Area, age 2024.

Tabel 8

The relationship between knowledge and self-management in Pauh Timur Village, Pariaman Community Health Center Working Area, age 2024 (n=33)

Knowl adge	Self manajemen				Total		<i>p</i> -
	Good		Less				
	<i>f</i>	%	<i>f</i>	%	N	%	
High	17	89.5	2	10.5	19	100	0
Low	5	35.7	9	64.3	14	100	
Total	22	66.7	11	33.3	33	100	

Based on table 10, it can be seen that the percentage of respondents with good self-management is more found in respondents who have high knowledge, namely 19 (57.6%) compared to respondents who have low knowledge, namely 14 (42.4%). The results of statistical tests using cross tabulation using the Fisher's Exact Test obtained a p value = 0.002 (p value 0.05 < α 0.002) so it can be concluded there is a significant relationship between knowledge and self-management in Diabetes

Mellitus patients in Pauh Timur Village, Pariaman Health Center Working Area, age 2024.

Tabel 9

The relationship between support and self-management in Pauh Timur Village, Pariaman Community Health Center Working Area, 2024 (n=33)

Family suport	Self Managemen					
	Good		Less		Total	
	<i>f</i>	%	<i>f</i>	%	N	%
High	18	81.8	4	18.2	22	100
Low	4	36.4	7	63.6	11	50
Total	22	66.7	11	33.3	33	100

Based on table 9, it can be seen that the percentage of respondents with good self-management is more found in respondents who have high support, namely 18 (81.8%) compared to respondents who have low support, namely 4 (18.2%). The results of statistical tests using cross tabulation using the Fisher's Exact Test obtained a p value = 0.017 (p value $0.05 < \alpha 0.017$) so it can be concluded that there is a significant relationship between family support and self-management in Diabetes Mellitus patients in Pauh Timur Village, Pariaman Health Center Working Area, age 2024.

Tabel 12

The relationship between self-efficacy and self-management in Pauh Timur Village, Pariaman Community Health Center Working Area, age 2024 (n=33)

Efikasi diri		Self manajemen				Total	
		Good		Less			
		<i>f</i>	%	<i>f</i>	%	N	%
High		1	82.	4	17.	2	100
		9	6		4	3	
Low		3	30.	7	70.	1	100
			0		0	0	
Total		2	66.	11	33.	3	100
		2	7		3	3	

Based on table 12, it can be seen that the percentage of respondents with good self-

management was found more in respondents who had high self-efficacy, namely 19 (82.6%) compared to respondents who had low self-efficacy, namely 3 (30.0%). The results of statistical tests using cross tabulation using the Fisher's Exact Test obtained a p value = 0.000 (p value $0.05 < \alpha 0.000$) so it can be concluded that there is a significant relationship between self-efficacy and self-management in Diabetes Mellitus patients in Pauh Timur Village, the working area of the Community Health Center Pariaman age 2024.

DISCUSSION

Age Responden

The results of the study conducted with 3 categories (Adults, Pre-elderly and elderly) in Pauh Timur Village, Pariaman Health Center Working Area showed that most respondents were in the age range of 45-59 (pre-elderly) while with 2 categories (adults/pre-elderly) in Pauh Timur Village showed that most respondents were in the age range of 19-59 (Adults/pre-elderly). Age is one of the factors that cannot be changed or avoided by individuals, the cause of someone over 40 years old experiencing a decline in body function so that the individual is easily at risk of health problems, one of which is DM. Although many researchers have revealed the high incidence of DM at age entering 40 years and above, this does not rule out the possibility that individuals who have age <40 years can be diagnosed with DM where the incidence of DM is not only from age factors, but can occur from other factors.

Knowledge of Responden

The results of a study conducted in Pauh Timur Village, within the Pariaman Community Health Center (Puskesmas) work area showed that more than half of the respondents had a high level of knowledge.

This is because the majority of respondents had a high level of education, with more than half having a high school education. This is consistent with Donsu's (2017) theory, which states that education level also determines how easily someone absorbs and understands the knowledge they acquire. Generally, the higher a person's education, the better their knowledge and the easier it is to accept it.

From this study, the researchers assume that individuals with a high level of education are generally responsive, have an interest in, and care about the health of themselves and their families, especially those of respondents with diabetes. They are also responsive in solving existing problems and are willing to seek knowledge from other sources. Likewise, someone with a low level of education does not necessarily have a low level of knowledge. This level of knowledge is not necessarily obtained through formal education; it can be acquired through non-formal education, namely gaining understanding and insight from reading various sources of information.

Family suport responden

The results of a study conducted at the Pauh Timur Community Health Center (Puskesmas) in the Pariaman Community Health Center area showed that more than half of the respondents had high levels of support. This was because their families were aware of the aspects of diabetes self-management that patients should undertake, and they had been with the patients for a long time. Some family members also accompanied the patients during visits to the community health center and to the doctor, thus providing good family self-care knowledge. Therefore, the greater the support provided by family members.

Respondent Self-Efficacy

The results of a study conducted in Pauh Timur Village, within the Pariaman

Community Health Center (Puskesmas), regarding the self-efficacy of diabetes mellitus patients using a questionnaire showed that more than half of the respondents had high self-efficacy. This is because diabetes mellitus patients have a strong belief in their abilities in every activity they undertake, are able to check their blood sugar regularly, are able to follow a healthy diet, have no difficulty adhering to a healthy diet in any situation, are able to choose healthy foods, and are able to engage in light activities that support their well-being.

Based on these results, the researchers assume that the application of high self-efficacy will influence a person's behavior. This involves behavioral choices, motivational efforts, resilience, facilitative thinking, and resistance to stress. High self-efficacy enables an individual to determine activities that should be undertaken, such as those that can improve their health. Likewise, someone with low self-efficacy will display a resigned attitude and be unwilling to put forth the effort to accomplish something that could benefit them.

Analisa Bivariat

The relationship between age and self-management

The results of the research conducted in Pauh Timur Village, Pariaman Health Center Working Area, showed that the percentage of respondents with good self-management was found to be more in respondents aged 44-59 (pre-elderly) compared to respondents aged 19-44 (adulthood). The results of the statistical test using cross tabulation using the chi-square test obtained a p value = 0.046 (p value $0.05 > \alpha$ 0.046) so it can be concluded that there is a significant relationship between age and self manajemen in Diabetes Mellitus patients in Pauh Timur Village aged 2024. Different from The results of the statistical test of 2 categories (Adults/Pre-elderly with Elderly), found more respondents who have age 19-59 (adults/pre-

elderly) namely 25 (87.9%) Self Management good, compared to respondents who have age 19-59 (adults/pre-elderly) namely 4 (12.1%) Less good, The results of the statistical test using cross tabulation using the chi-square test obtained a p value = 0.096 ($p \text{ value } 0.05 > \alpha$ 0.096) then it can be concluded, There is no significant relationship between age and self-management in Diabetes Mellitus patients in Pauh Timur Village aged 2024.

CONCLUSION

Self-management of type II diabetes mellitus is key to improving patients' quality of life and preventing long-term complications. However, patients often face various challenges in adhering to appropriate treatment, managing their diet, increasing physical activity, and regularly monitoring their blood sugar. These challenges are often caused by a lack of education, difficult lifestyle changes, and a lack of social and psychological support.

To address these challenges, it is crucial to provide comprehensive education, medical assistance, and psychological support that can help patients understand the importance of regular and ongoing diabetes management. Furthermore, easier access to healthcare services and support facilities is essential to enable patients to optimize their disease management.

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