

Predictor Barriers to Self-Care Management in Diabetes Mellitus Clients in Kudus Regency

Lasmini¹ ✉, Muhamad Jauhar²

^{1, 2} Faculty of Health Sciences, University of Muhammadiyah Kudus, Jl. Ganesha Raya No. 1 Purwosari Kudus, Indonesia

✉ Correspondence Author : lasmini@umkudus.ac.id

ABSTRACT

Problem health problems that arise due to diabetes mellitus (DM) can controlled if DM sufferers apply self-management. Research This aim for analyze predictor Barriers to self-care management in clients with diabetes mellitus. Research design use descriptive correlation with approach *cross-sectional*. Study conducted at the Dawe Community Health Center, Kudus Regency in the month of February 2025. Research sample as many as 106 respondents through purposive sampling technique. Criteria Inclusion in study This that is patients suffering from Type 2 DM, patients undergoing DM treatment, Age 18-60 years, able reading and writing. While criteria exclusion in study This that is type 2 DM patients who have mental limitations or physical, have complications ulcer diabetic, and retinopathy. The instruments used in study This is Summary of Diabetes Self-Care Activities (SDSCA) questionnaire, *Diabetes Management Self-Efficacy Scale (DMSES)*, *Health Belief Model Questionnaire (HBMQ)*, *Health Literacy Questionnaire (HLQ)*. Data analysis using tests *Chi Square*. *Research Results Show that Self Efficacy, belief health, literacy health and support family relate significant with Self-Care Management in diabetes mellitus clients with a p-value of 0.000 (p value < 0.05)*. Research furthermore expected can evaluate intervention more education intensive and empowering family by force nursing to reduce these obstacles.

KEYWORDS

Support family; health literacy; health beliefs; self-care management of diabetes mellitus; self-efficacy

INTRODUCTION

Diabetes mellitus (DM) is a problem health main and also is disease No infectious diseases (NCDs) which are becoming priority. (Retta et al., 2023) . Diabetes mellitus (DM) affects various group age and social status. Disease This No only burdensome individuals who experience it, but also families, communities and countries as a whole overall. (Patty, Yohana Febriani Putri Peu, Mufarrihah, and Nita, 2021)

Prolonged diabetic hyperglycemia If No managed with Good relate with ongoing dysfunction, deficiency, and damage various part body, especially vessels blood, eyes, heart, nerves and kidneys. Development complications of diabetes can prevented with strict manner with control metabolism and practice management maintenance efficient self.

Practice management maintenance self is something complex and comprehensive design general interpreted as ability somebody for control visceral and results psychosocial, treatment, symptoms and modification style life important in existence with disturbance term length and capability for nurse self alone and carry out important events for achieve, preserve or support ideal health. Lack of activity physical, smoking, no proper diet methods, consumption alcohol, obesity and pressure blood tall is a number of factor risk of type 2 diabetes mellitus. Most of factor the risk of type 2 diabetes mellitus and its complications can modified (Bukhsh, A., Khan, TM, Nawaz, MS, Ahmed, HS, Chan, KG, Lee, LH, & Goh, 2018)

Self-care management is adopted behavior for increase health a person. Behavior and activities

maintenance self studied in his role for increase control glycemic, reducing complications related to diabetes, and contribute for increase quality life in a way overall in diabetes sufferers. According to study (Al Fatih et al., 2024) with title connection literacy health and self-efficacy with diabetes self-management compliance states that There is significant relationship between literacy health with diabetes self-management compliance and there is also a relationship between self-efficacy and diabetes self-management compliance. Meanwhile study (Hijriana et al., 2023) in his research with title connection support family and self-care management with quality life diabetes mellitus (DM) sufferers that There is connection support family on quality life diabetes mellitus sufferers ($p = 0.015$). This in line with study (Rosyida, 2024) in his research with connection between efficacy self, confidence health and care self in diabetes mellitus sufferers type 2 that There is significant relationship between efficacy self and care self.

Research result This enrich knowledge nurse about obstacle predictors phenomena and develop technique communication therapeutic, so that role nurse as educators and researchers in give education *self-care management* in detection early diabetes mellitus can run. With existence ability self-care management of diabetes in DM sufferers, then will increase mechanism coping they to disease and improve belief will improvement his health so that will has implications for increasing quality life. Study This aim for analyze predictor barriers to self-care management in clients with diabetes mellitus.

METHODS

Study This designed with use descriptive

correlation and cross-sectional approach. Predictors (efficacy self, confidence health, literacy health, support family) is variables independent research, and self-care management in diabetes mellitus sufferers is variables dependent. Research This done in the month February 2025 throughout Diabetes Mellitus patients Respondents registered in the medical register book in the Dawe Community Health Center UPT area, Kudus Regency. Sample size determined based on formula Lemeshow and obtained amount respondents as many as 106 people. (Darma, 2011) Retrieval sample done with using purposive sampling with notice criteria inclusion and exclusion criteria Inclusion in study This that is patients suffering from Type 2 DM, patients undergoing DM treatment, Age 18-60 years, able reading and writing. While criteria exclusion in study This that is type 2 DM patients who have mental limitations or physical, have complications ulcer diabetic, and retinopathy.

Instruments used in study This is Summary of Diabetes Self-Care Activities (SDSCA) questionnaire developed by the General Services Administration (GSA) Regulatory Information Service Center (RISC). measure behavior management self use questionnaire Summary of Diabetes Self-Care Activities (SDSCA) consists of of 16 modified and already completed questions translated into the Indonesian in research previously. Researchers conduct validity and reliability tests previously. The validity results of the SDSCA questionnaire showed that r count in the range 0.638 – 0.951 (>0.631) which means all question declared valid while Cronbach's Alpha result 0.959 (0.60). (Toobert et al., 2000) . for measure efficacy self use Diabetes Management Self-Efficacy Scale (DMSES)

questionnaire consisting of of the 20 questions that have been quoted from study (Noroozi & Tahmasebi, 2014) . Questionnaire the has been in validity and reliability test with results validity of 0.955. (Marlina TT, Haryani, 2024). *The Health Belief Model Questionnaire* (HBMQ) was used for measure belief Health will consist of from 6 domains, namely susceptibility, severity, threats, benefits, obstacles and efficacy self. Questionnaire This consists of of 49 items. Validity value questionnaire This of 0.406-0.831 and the value its reliability of 0.89. (Fithri, R., Athiyah, U., & Zairina, 2021)

The Health Literacy Questionnaire (HLQ) was used for measure literacy health consists of 5 domains consisting of from reading, access Health in formation, skills understanding, evaluating, and making decision. Questionnaire This contains 33 statement items. Validity value questionnaire of 0.60-0.76 and the value reliability questionnaire of 0.89 (Ahmadi, A., 2019) . *The Diabetes Family Support Scale* was used for

measure situation support family. This scale is type Likert 4 points answer in scale the classified as “ I am very I agree, I I agree, I I'm confused, No I agree, I absolutely not agree ”. Lowest score scale is 1 and the highest is 4. *Cronbach Alpha coefficient* of sub-dimensions scale original found 0.84 and r count validity test 0.47 – 0.82. (Sofulu et al., 2017)

Data analysis in study This use application computer data processing consisting of from analysis univariate and bivariate analysis univariate describe characteristics respondents, efficacy self, confidence health, literacy health and support family with interpret frequency and percentage. Analysis bivariate identify *connection* between predictor (efficacy self, confidence health, literacy health and support family with obstacles that affect self care management using tests *Chi Square with degrees 95% confidence with alpha value of 5% or 0.05*. Research This has get permission ethics from committee ethics study with number 188/Z-7/KEPK/UMKU/II/2025.

RESULT AND DISCUSSION

Respondent Characteristics

Table 1. Characteristics of Diabetes Mellitus Clients (n=106)

Characteristics of DM Clients	Category	Frequency		Mean	SD
		f	%		
Gender	Man	28	26.4	53.8	10.14
	Woman	78	73.6		
Age	26 - 55 Years	58	54.7		
	56 - 60 Years	19	17.9		
	>60 Years	29	27.4		
Education	No school	6	5.7		
	Elementary School	40	37.7		
	Junior High School	36	34.0		
	Senior High School	18	17.0		
	College	6	5.7		
Employment Status	Doesn't work	51	48.1		
	Work	55	51.9		
	<= 5 years	86	81.1		

Characteristics of DM Clients	Category	Frequency		Mean	SD
		f	%		
Long Time Suffering from Diabetes	>= 5 years	20	18.9		
Total		106	100%		

Based on Table 1, it is explained that the gender of the male is 28 (26.4%) respondents and female is 78 (73.6%). The age of the respondents is 26-55 years as many as 58 (54.7%), age 56-60 years as many as 19 (17.9%) respondents and age >60 years as many as 29 (27.4%) respondents. The highest education is elementary school as many as 40 (37.7%) respondents, junior high school as many as 36 (34%), high school as many as 18 (17%) and college or those who do not attend school each as many as 6 (5.7%) respondents. The employment status of the respondents is mostly working as many as 55 (51.9%) and not working as many as 51 (48.1%) and the average duration of suffering from DM is less than 5 years as many as 86 (81.1%) respondents.

Univariate Analysis of Variables

Table 2. Self Care Management in Diabetes Mellitus Clients (n=106)

Self Care Management	f	%
Tall	51	48.1
Currently	31	29.2
Low	24	22.6
Total	106	100.0

Based on table 2, it shows that Self Care Management of Diabetes Mellitus Clients in Dawe Health Center, Kudus Regency is in the high category at 51 (48.1%).

Table 3. Health Beliefs in Diabetes Mellitus Clients (n=106)

Health Beliefs	f	%
Good	35	33.0
Enough	25	23.6
Not enough	46	43.4
Total	106	100.0

Based on table 3, it shows that health beliefs in Diabetes Mellitus Clients in Dawe Health Center in Kudus Regency is categorized as lacking as many as 46 (43.3%)

Table 4. Self-Efficacy in Diabetes Mellitus (n=106)

Self Efficacy	f	%
Good	50	47.2
Currently	45	42.5
Low	11	10.4
Total	106	100.0

Based on table 4, it shows that the Self-Efficacy of Diabetes Mellitus Clients in Kudus Regency is categorized as good at 50 (47.2%), moderate at 45 (42.5%) and low at 11 (10.4%).

Table 5. Health Literacy in Diabetes Mellitus Clients (n=106)

Health Literacy	f	%
Tall	57	53.8
Currently	14	13.2
Low	35	33.0
Total	106	100.0

Based on table 5, it shows that health literacy in Diabetes Mellitus Clients in Dawe Health Center, Kudus Regency is in the high category at 57 (53.8%)

Table 6. Family Support for Diabetes Mellitus Clients (n=106)

Family Support	f	%
Tall	50	47.2
Currently	32	30.2
Low	24	22.6
Total	106	100.0

Based on table 6, it shows that health literacy in Diabetes Mellitus Clients in Dawe Health Center, Kudus Regency is in the high category at 50 (47.2%).

Table 7. Relationship between Self-Care Management and Self-Efficacy on Diabetes Mellitus Clients (n=106)

		Self Efficacy			Total	p-value
		Good	Currently	Low		
Self Care Management	Tall	35	14	2	51	0.000
	Currently	8	20	3	31	
	Low	7	11	6	24	
Total		50	45	11	106	

Based on table 7, it shows that respondents who have high self-care management will have good self-efficacy as many as 35 respondents. While respondents who have moderate self-care management will have self-efficacy as many as 20 respondents. And respondents who have low self-care

management will tend to have low self-efficacy as many as 6 respondents. Statistical test results *Chi-Square* obtained a p-value of 0.000 ($p\text{ value} < 0.05$) which means that self-care management and self-efficacy have a significant relationship.

Table 8. Relationship between Self Care Management and Health Beliefs on Diabetes Mellitus Clients (n=106)

		Health Beliefs			Total	p-value
		Good	Enough	Not enough		
Self Care Management	Tall	33	12	6	51	0.000
	Currently	1	10	20	31	
	Low	1	3	20	24	
Total		35	25	46	106	

Based on table 8, it shows that respondents who have high self-care management will have good health beliefs as many as 33 respondents. While respondents who have moderate self-care management will have sufficient health beliefs as many as 10 respondents. And respondents who have low self-care management will

tend to have less health beliefs as many as 20 respondents. Statistical test results *Chi-Square* obtained a p-value of 0.000 ($p\text{ value} < 0.05$) which means there is a significant relationship between self-care management and health beliefs.

Table 9. Relationship between Self Care Management and Health Literacy on Diabetes Mellitus Clients (n=106)

		Health Literacy			Total	p-value
		Tall	Currently	Low		
Self Care Management	Tall	50	0	1	51	0.000
	Currently	5	7	19	31	
	Low	2	7	15	24	
Total		57	14	35	106	

Based on table 9, it shows that respondents who have high self-care management tend to have high health literacy of 50. Respondents with moderate self-care management have moderate health literacy of 7.

Meanwhile, respondents who have low self-care management will have low health literacy of 15. The results of the statistical test *Chi-Square* obtained a p-value of 0.000 ($p\text{ value} < 0.05$) which means there is a

significant relationship between self-care management and health literacy.

Table 10. Relationship between Self Care Management and Family Support on Diabetes Mellitus Clients (n=106)

		Family Support			Total	p-value
		Tall	Currently	Low		
Self Care Management	Tall	50	1	0	51	0.000
	Currently	0	31	0	31	
	Low	0	0	24	24	
Total		50	32	24	106	

Based on table 10, it shows that respondents who have high self-care management tend to have high family support of 50. Respondents with moderate self-care management have moderate family support of 31. Meanwhile, respondents who have low self-care management will have low family support of 24. The results of the statistical test *Chi-Square* obtained a p-value of 0.000 ($p\text{ value} < 0.05$) which means that there is a significant relationship between self-care management and family support.

Characteristics of Diabetes Mellitus Clients

Results analysis univariate obtained that part respondents various sex Woman (73.6%). Appropriate with study conducted by Komariah & Rahayu (2020) in his research with respondents type 2 DM clients obtained that part big the respondents is Woman that is as much as 81 people (60.4%). Also in accordance with results study Dalawa, FN, Kepel, B., & Hamel, (2013) which states that sufferers type 2 diabetes mellitus is the most common various sex women (63.5%). This can caused by Because Woman in a way physique own opportunity occurrence improvement index mass more body big so that risk to diabetes is also increasing big (Irawan, 2010). Other research states that that higher risk of diabetes tall in women caused by Because style life for example not enough

activity and exercise, obesity, history diabetes at the moment pregnant, age, BMI big, syndrome cycle menstruation, and easy accumulation of fat during menopause so that result in transportation glucose in cell disturbed (Srivastava *et al.*, 2015).

Based on research conducted majority aged 25-55 years (54.7%). Age 25–60 years also called the "silent age" for type 2 DM because symptom often No realized until appear complications. This is caused by because at the age This including in age productive where diabetes mellitus (DM) is in the range age This generally caused by a combination factor style life, genetics, and environment so that influence level glucose in blood.

Based on research conducted majority elementary school education as many as 40 (37.7%). A study in Korea (Lee, *et.al.* 2024) showed that that prevalence of DM is higher high among people with education low : 20.9 % on the only graduated from elementary school or less, compared to 4.2 % of graduates college high ($p < 0.001$). People with education more tall tend own ability more Good in understand in formation health, such as food labels, instructions doctors, and DM management. On the other hand, education low often associated with low literacy medical, which affects blood sugar control and

self-management. Further education tall allows individual for more easy receive, understand, and analyze in formation, so that they can access more knowledge area. On the other hand, the level of low education can become obstacle in development attitude to reception in formation, knowledge, and values that support change behavior In addition based on research that has been done average respondents status work. Heraclides et al. (2009) showed that stress high work increase risk of type 2 diabetes in men up to 1.46 times more big. Work with pressure tall, responsible answer large, or working hours long can cause stress chronic stress This increase hormone cortisol which can increase insulin resistance, triggers Eat excessive, especially food high in sugar and can bother Sleep which makes things worse control glucose.

Results study obtained respondents Once follow DM socialization as much as 99 (93.4%). This in line with The American Diabetes Association (ADA, 2021) states that DM socialization gives in formation about What What is DM, its causes, symptoms and complications, how to treat it manage pattern eating, exercise, medication, and blood sugar control, signs dangers (eg : hypoglycemia, diabetic wounds) with thus patient more aware, understanding, and motivated for do maintenance true self. This is also influenced by the length of time in suffering from DM. found results <5 years as many as 86 (86.1%). This result in line with study (Dewi, R., Panduragan, SL, & Syazana, 2022) which shows part big respondents in his research suffer DM for 1-5 years since diagnosed (80.6%). Other research results also shows that long suffer from Type 2 DM sufferers in Java East majority

in the range 1-5 years (55%) (Tsalissavrina *et al.*, 2018).

The Relationship between *Self-Efficacy* and *Self-Care Management* on Diabetes Mellitus Clients

The results of the study showed that self - efficacy and self - care management had a significant relationship. Self - efficacy is closely related to self-care because higher self-efficacy leads to increased self-care practices, such as diet management, physical activity, foot care, blood sugar monitoring, and medication for diabetes mellitus patients. (Irawan, D., Ismonah, & Handayani, 2023)

According to research conducted (Despitasari, L., Sastra, L., Alisa, F., Amelia, W., & Desnita, 2022), the results showed a correlation between self-efficacy and self-care in type 2 DM patients. Self-care aims to achieve glucose within normal limits and avoid various complications. Treatment for Type II DM takes a long time. Thus, self-efficacy adequate care is necessary during treatment. Confidence that grows within a person will encourage him to carry out actions that are considered beneficial. A person with strong beliefs will have an impact on implementation of self care as an effective step in managing diabetes mellitus and will do this in everyday life. Patients who have a high level of self-efficacy will tend to have great motivation to do self care, so as to reduce the risk the occurrence of complications in diabetes mellitus.

According to (Munir, NW, & Solissa, 2021) in studies they stated that self - efficacy is related with self-care in diabetes mellitus patients. Self-efficacy is component key in management diabetes mellitus. Belief high self will influence on activities maintenance the necessary self for reach level glucose normal

blood. Belief on ability the higher self, the so-called self - efficacy, can help sufferers diabetes mellitus in guard behavior maintenance yourself to be able to treating diabetes mellitus with good. Self-efficacy becomes pattern in behave to health that originate from self someone, thing This affected factor in the form of external stimuli and factors internal individual. Beliefs self play role important in change behavior health someone. Dietary compliance in diabetes mellitus related with level of self - efficacy. The more tall self-efficacy level somebody, the more Good behavior his health.

In research (Kartini, SFA, Dewi, R., & Liawati, 2023) known that there is correlation between self - efficacy and self-care in patients Diabetes mellitus Type II. Believers self tend own skills nurse good self. Self-efficacy plays a role role Which important in diabetes treatment mellitus. If somebody own level belief high self, they with diabetes mellitus can do maintenance self so that blood sugar levels still stable. Based on study (Nugraha, 2021) elements that can influence maintenance oneself on patient diabetes mellitus among others covering knowledge, belief self, support family, motivation, and counseling And in formation that given.

Self-efficacy can used for planning and evaluating as well as effective in support change self - care behavior Because focus on modification behavior. Ability family in support self - care is key success, Which measured from ability identify problem, create decision, nurse member family, change environment, And use facility health. Giving in formation and learning by officer health to diabetes sufferers mellitus related with maintenance self, diet, exercise, blood sugar

monitoring, use medicine and treatment foot.

The Relationship Between Health Beliefs and Self-Care Management on Diabetes Mellitus Clients

Results showed a significant relationship between health beliefs and self-care management. The results of the study (Tsai, MC, Chuang, HL, Huang, CY, Lee, SH, Liao, WC, Lee, MC, & Kuo, 2021) showed that diabetic foot self-care behaviors were positively and significantly correlated with diabetic foot ulcer health beliefs. Each subscale (benefit, threat, and barrier beliefs) was positively correlated with diabetic foot self-care behaviors. Further analysis of the self-care behavior subscales of frequency and number of days of care per week showed a positive correlation with beliefs, but only threat beliefs were inconsistent.

Positive health beliefs about diabetes are expected to improve patient adherence to their treatment. Similar results also indicate that applying the health belief model to self-care in diabetes patients has a significant impact on health behaviors. According to another study on diabetes based on the health belief model, higher threat beliefs correlate with better diabetes self-care behaviors. However, the study showed that threat beliefs did not affect health behaviors (number of days of activity per week). Similarly, the study also showed that threat beliefs were not significantly correlated with diabetic foot self-care behaviors. A meta-analysis showed a positive relationship between perceived disease severity and adherence to treatment, but adherence was affected when the patient's health was compromised. The reason may be because health beliefs in this study primarily concerned beliefs about benefits and whether these beliefs could be associated with reduced or

worsened foot ulcers. There fore, similar to the results of previous studies, there was no consistent conclusion regarding threat beliefs.

This study also found that having a housemate, higher perceived benefits, and perceived barriers were significant predictors of overall diabetic foot self-care behavior. The literature suggests that social support is an important factor in improving self-care behavior, and patients with better family functioning have better self-care behavior overall. Based on the literature and current findings, it is clear that there is a positive relationship between health beliefs about diabetic foot self-care and adherence to treatment. Perceived benefits influence the behavior of diabetes patients seeking regular medical care. Perceived benefits are also a significant predictor of the number of days of implementation per week, while having a housemate, perceived benefits, and perceived barriers are significant predictors of the frequency of the behavior. Stronger perceived benefits related to health behaviors are associated with better treatment and preventive behaviors. Patients are more willing to practice self-care behaviors regularly when they believe that self-care will benefit their disease. Several studies have shown that those with lower perceived susceptibility, severity, perceived benefits, and perceived barriers engage in significantly more preventive health behaviors. Thus, perceived barriers have a negative correlation with health behaviors. Interestingly, our study showed that patients with higher perceived disease threat had higher barriers to health behaviors and better preventive behaviors. Patients' perceived barriers were a significant predictor of diabetic foot self-care behaviors and frequency.

The Relationship between Health Literacy and Self Care Management in Diabetes Mellitus Clients

The results of the study showed that there was a significant relationship between health literacy and self - care management. Literacy health is part the most important thing that is needed owned client for can succeed in do management maintenance disease chronic specifically Diabetes Mellitus (Sari & Sari, 2023).

Study This in accordance with results Sabil's research, (2018) that state that there is connection between *health literacy* with *self care management* for type 2 diabetes sufferers at the Makassar City Health Center. Other similar research that is study (Masoompour, M., Tirgari B., 2017) show that There is significant relationship between literacy health behavior awake health and care self.

Literacy health or also known as awake health is something ability and skills individual in use function cognitive for reading, assessing, and understand, and do skills social in look for in formation, interaction and communication used in take decision Which appropriate related condition health and reflect his knowledge the in prevent disease and increase health (Nutbeam D, 2015). There fore literacy health is part most important what is needed owned client for can succeed in do management maintenance disease chronic especially Diabetes Mellitus.

Heijmans, M., Waverijn, G., Rademakers, J., van der Vaart, R., & Rijken, (2015) that with level low *health literacy* happen improvement number disease chronic amounting to 47% of the total load disease, and *health literacy* plays a role role important in management disease chronic. *Health literacy* in every

individual important for known. Because relate with ability for get in formation health in effort increase and maintain his health. Clients with diabetes need maintenance self for can prevent complications and increase quality his life (American Association of Diabetes Educators, 2020). Behavior maintenance self on client with diabetes refers to various activity between others: adhere to a healthy diet, do activity physique in a way regular, consumption drug regularly, and do blood sugar control (Srivastava *et al.*, 2015). Clients who have good blood sugar control will influential to improvement quality his life (Luthfa and Fadhilah, 2019). Xu *et al.*, (2018) stated that Lots client can reduce possibility complications term long with follow behavior maintenance self (self -*management*). Good understanding will importance management maintenance on the client with diabetes is something very important thing for done so that minimize risk occurrence complications diabetes mellitus.

The Relationship between Family Support and Self - Care Management in Diabetes Mellitus Clients

The results of the study showed that there was a significant relationship between family support and *cell f- care management*. Support provided by the family becomes a motivation for diabetes mellitus sufferers to improve their quality of life, this support makes sufferers feel cared for, get in formation related to their disease, so that sufferers are able to reduce obstacles in treatment and self-care. Social support is one of the most effective factors in diabetes self-care, family support is part of social support, the family is the basic unit of the social network where learning behavior occurs, decision-making related to treatment and controlling the disease is also influenced by family

members. Increased social support and self-care can improve more effective glycemic control in sufferers (Mohebi, S., Parham, M., Sharifirad, G., & Gharlipour, 2018)

This study aligns with research by Komaratat *et al.* (2021); Lee & Oh (2020), which states that social support dimensions have a positive relationship with quality of life, including emotional support, moral support, and appraisal support. A good quality of life is demonstrated by the dimensions of energy/mobility, sexual function, social function, anxiety, diabetes control, and health problems. Patients with type II diabetes who have a better quality of life are evidenced by higher levels of social support compared to patients who receive lower levels of social support.

Emotional and in formational support from family members indirectly contributes to improving health and reducing psychological stress, the physical impact of the disease and causing positive effects on the physical and mental dimensions of quality of life. Gender is not related to a person's quality of life because currently both men and women have the same role in society, besides that work is also not related to a person's quality of life, in people who are retired or unemployed have more free time to relax compared to those who work will have the burden and stress of the job. Complications in people with diabetes mellitus, such as hypertension, cholesterol, other cerebrovascular diseases also affect the quality of life of sufferers.

Research Limitations

In this study, the researcher experienced time constraints in collecting data because it required a longer time and the target respondents were quite

numerous.

CONCLUSION AND RECOMMENDATIONS

Research result show that there is significant relationship between *self-efficacy*, health beliefs, health literacy, and support family with *self-care management*. The results of this study can enrich knowledge nurse about obstacle predictors phenomena and develop technique communication therapeutic, so that role nurse as educators and researchers in give education *self-care management* in detection early diabetes mellitus can run. With existence self-care management skills for diabetes in DM sufferers, then will increase mechanism coping they to disease and improve belief will improvement his health so that will has implications for increasing quality life.

Ethics Approval and Consent to Participate

This research has been declared to have passed the ethical review of the Health Research Ethics Committee of the Muhammadiyah University of Kudus with the number 188/Z-7/KEPK/UMKU/II/2025.

Acknowledgement

Researchers say accept love to the Research and Community Service Institute to the Muhammadiyah University of Kudus Community who have give support funding in scheme grant internal research of lecturers year 2025 budget. Researchers also said accept love to service health and unity agency nation and politics Kudus Regency which has give licensing study as well as Dawe Health Center

which has give support facilities and infrastructure and respondents study.

REFERENCES

- Ahmadi, A., F.S. (2019). Construct Validation of the Health Literacy Questionnaire (HLQ) in Shahrekord Cohort Study, Iran. *Journal of Human, Environmental, and Health Promotion*, 5(1), 26–31. <https://doi.org/10.29252/jhehp.5.1.5>
- Al Fatih, H., Ningrum, TP, & Handayani, H. (2024). The Relationship Between Health Literacy and Self-Efficacy with Diabetes Self-Management Adherence. *BSI Nursing Journal*, 12 (1), 34–43. <https://ejurnal.ars.ac.id/index.php/keperawatan/index>
- American Association of Diabetes Educators. (2020). *An Effective Model of Diabetes Care and Education: Revising the AADE7 Self-Care Behaviors®*. Diabetes Educator. <https://doi.org/https://doi.org/10.1177/0145721719894903>
- Bukhsh, A., Khan, TM, Nawaz, MS, Ahmed, HS, Chan, KG, Lee, LH, & Goh, BH (2018). Association of diabetes-related self-care activities with glycemic control of patients with type 2 diabetes in Pakistan. *Attention Preference and Adherence*, 12, 2377–2385. <https://doi.org/https://doi.org/10.2147/PPA.S177314>
- Darma, KK (2011). *Nursing Research Methodology*. Trans Info Media.
- Despitasari, L., Sastra, L., Alisa, F., Amelia, W., & Desnita, R. (2022). The Relationship Between Self-Efficacy and Self-Care in Patients with Type 2 Diabetes Mellitus at Andalas Community

- Health Center. *Amanah Kesehatan Journal*, 4(2), 117–116.
- Dewi, R., Panduragan, S. L., & Syazana, N. (2022). The Effect of Religion, Self-Care, and Coping Mechanisms on Quality of Life in Diabetes Mellitus Patients. *Jurnal Keperawatan Padjadjaran (JKP)*, 10(1), 58–65. <https://doi.org/https://doi.org/doi.org/10.24198/jkp.v10i1.1971>
- Fithri, R., Athiyah, U., & Zairina, E. (2021). The development and validation of the health belief model questionnaire for measuring factors affecting adherence in the elderly with hypertension. *Journal of Basic and Clinical Physiology and Pharmacology*, 32(4), 415–419. <https://doi.org/https://doi.org/10.1515/jbcpp-2020-0459>
- Heijmans, M., Waverijn, G., Rademakers, J., van der Vaart, R., & Rijken, M. (2015). Functional, communicative and critical health literacy of chronic disease patients and their importance for self-management. *Patient Education and Counseling*, 98(1), 41–48.
- Hijriana, I., Yusnita, Y., & Wati, S. (2023). The Relationship between Family Support and Self-Care Management and Quality of Life in Diabetes Mellitus Patients. *Journal of Nursing*, 15 (2), 653–660. <https://doi.org/10.32583/keperawatan.v15i2.883>
- Irawan, D., Ismonah, & Handayani, A. (2023). The Relationship Between Self-Efficacy and Self-Care Management in Type 2 Diabetes Mellitus Patients in the Karangayu Community Health Center Assistance Area. *Indonesian Nursing Journal*, 6(3) (1234–1248). <https://doi.org/https://doi.org/10.32584/Jpi.V6i3.1915>
- Kartini, SFA, Dewi, R., & Liawati, N. (2023). The Relationship Between Self-Efficacy and Family Support with Self-Care in Type II Diabetes Mellitus Patients at the UPTD Kadudampit Community Health Center, Sukabumi Regency. *Journal of Public Health Pearls*, 8(1), 46–53. <https://doi.org/https://doi.org/https://doi.org/10.51544/jmkm.v8i1.4248>
- Marlina TT, Haryani, W. (2024). The validity and reliability of the Indonesian version of the Diabetes Mellitus Self-Efficacy Scale (DMSES-I. *Journal of Research in Nursing*, 29(8), 666–678. <https://doi.org/10.1177/17449871241276816>
- Masoompour, M., Tirgari B., & G. Z. (2017). The relationship between health literacy, self-efficacy, and self-care behaviors in diabetic patients. *Evidence Based Care*, 7(3), 17–25.
- Mohebi, S., Parham, M., Sharifirad, G., & Gharlipour, Z. (2018). Social Support and Self - Care Behavior Study. *January*, 1–6. <https://doi.org/https://doi.org/10.4103/jehp.jehp>
- Munir, NW, & Solissa, MD (2021). The Relationship Between Self-Efficacy and Self-Care in Diabetes Mellitus Patients at the Tamamaung Community Health Center, Makassar City. *Widya Gantari Indonesian Nursing Journal*, 5(1), 1–6.
- Noroozi, A., & Tahmasebi, R. (2014). The diabetes management self-efficacy scale: Translation and psychometric evaluation of the Iranian version. *Nursing Practice Today*, 1 (1), 9–16. <http://npt.tums.ac.ir>

- Nugraha, MI (2021). Dominant Factors Associated with Self-Care in People with Diabetes. *Suara forikes Health Research Journal*, 12, 140–144. <https://doi.org/https://doi.org/http://dx.doi.org/10.33846/sf12nk227>
- Patty, Yohana Febriani Putri Peu, Mufarrihah, and Nita, Y. (2021). Cost of illness of diabetes mellitus in Indonesia: a systematic review. *Journal of Basic and Clinical Physiology and Pharmacology*, 32, n, 285–295. <https://doi.org/https://doi.org/10.1515/jbcpp-2020-0502>
- Retta, E., Kusumajaya, Hh., & Arjuna. (2023). Factors Associated with the Selection of Herbal Treatment in Diabetes Mellitus Patients. *Journal of Professional Nursing Research*, 5 (November), 1541–1552.
- Rosyida, R. W. (2024). Relationships between self-efficacy, health belief, and self-care among type 2 diabetes mellitus. *Journal of Community Empowerment for Health*, 7(1), 6. <https://doi.org/10.22146/jcoemph.78298>
- Sofulu, F., Unsalavdal Rn, E., & Arkan Rn, B. (2017). Validity and reliability of the diabetes family support and conflict scale in Turkish. *Acta Medica Mediterranea*, 33(1), 107–114. https://doi.org/10.19193/0393-6384_2017_1_017
- Toobert, D. J., Hampson, S. E., & Glasgow, R. E. (2000). The Summary of Diabetes Self-Care. *Diabetes Care Journal*, 23(7), 943–950.
- Tsai, M. C., Chuang, H. L., Huang, C. Y., Lee, S. H., Liao, W. C., Lee, M. C., & Kuo, C. P. (2021). Exploring the relationship of health beliefs and self-care behaviors related to diabetic foot ulcers of type II diabetes mellitus patients: A cross-sectional study. *International Journal of Environmental Research and Public Health*, 18(13), 1–9. <https://doi.org/https://doi.org/10.3390/ijerph18137207>