

DIABETES SELF-MANAGEMENT AND SELF-EFFICACY TRAINING FOR DIABETES MELLITUS PATIENTS**Arbani Batubara^{1*}, Agustina Boru Gultom^{2*}, Dedy Fernandes³**¹⁻³Nursing Department, Politeknik Kesehatan Kementerian Kesehatan Medan

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Disubmit: 21 Juli 2026 Diterima: 06 Agustus 2026 Diterbitkan: 07 Agustus 2026
Doi: <https://doi.org/10.33024/jkpm.v9i9.27202>**ABSTRACT**

This community service program aimed to improve self-efficacy and reduce stress in diabetes mellitus patients. The training was held on April 28 and 29, 2026, involving 30 diabetes mellitus patients from two villages in the working area of the Sei Semayang Community Health Center, Deli Serdang Regency, each with 15 participants from Sei Semayang Village and Serba Jadi Village. The approach used was the Participatory Action Research (PAR) method, this activity included a pre-test measuring self-efficacy and stress using a questionnaire, a discussion on the description of diabetes mellitus, a discussion accompanied by demonstrations and redemonstrations regarding diabetes mellitus self-management, and diabetes mellitus self-efficacy, with the help of a booklet, and a post-test with the same measurements and questionnaires. The results of community service activities show a positive impact on the self-efficacy of diabetes mellitus patients increasing from a score of 48.33 to a score of 55.23, on stress decreasing from a score of 36.00 to a score of 22.00 and based on the Wilcoxon test showing significant results with a p value of 0.0001 each. This increase indicates that the training effectively increases self-efficacy and reduces stress in diabetes mellitus patients to be able to manage daily life regarding diet, physical activity, foot care and foot exercises, control their own blood glucose, stress management and manage their self-efficacy. This activity contributes to strengthening the attitudes and emotions of participants to be able to improve their quality of life in living their daily lives.

Keywords: Diabetes Self-Management and Self-Efficacy Training, Self-Efficacy, Stress, Diabetes Mellitus.

1. INTRODUCTION

In Indonesia, the number of cases of diabetes mellitus in people aged ≥ 15 years has increased from 2.0 percent in 2018 to 2.2 percent in 2023 (Tim Riset Kesehatan Dasar 2018 (Indonesia) & Indonesia, 2019), (Kemenkes BKKP, 2023). In Deli Serdang Regency, North Sumatra Province, cases of type 2 diabetes mellitus ranked 5th out of 10 most common diseases with 26,318 cases in 2023 (BPS Kabupaten Deli Serdang, 2024).

Diabetes mellitus, which continues to worsen, can lead to serious and potentially fatal complications. Controlling this disease involves maintaining proper care and self-management in daily life (Alam et al., 2021). Diabetes mellitus patients need to know how to carry out complex and lifelong self-management so that they can reduce the long-term harmful risks (Woodward et al., 2024).

A patient's ability to manage themselves depends heavily on their self-efficacy. Self-efficacy is an individual's belief or perception of their ability to perform a specific action. Self-efficacy plays a crucial role in diabetes self-management because it serves as a predictor of the success of therapy for diabetes mellitus patients. Previous studies have shown that self-efficacy contributes to 11.4 percent of individuals engaging in diabetes self-management, 31.3 percent of individuals intending to do so, 10 percent of individuals demonstrating increased adherence to healthy eating habits, exercise, self-monitoring of blood glucose, increased foot care, and an impact on blood glucose control. Meta-analysis results indicate that health education interventions on self-efficacy can enhance self-efficacy, regulate self-management behaviors, and ultimately improve the quality of life of diabetes mellitus patients ((Alshaikh et al., 2024).

Effective self-management is a daily routine that includes a healthy diet, regular physical activity, blood glucose monitoring, problem-solving skills, efforts to reduce risk, and the application of healthy problem-solving skills. Efforts to organize tasks in self-management can be stressful. Previous studies have shown that approximately 18 to 35 percent of diabetes mellitus patients experience high levels of stress due to their diabetes mellitus diagnosis, including the threat of complications, demands for self-management, unresponsive providers, lack of interpersonal support, the nature of the disease, and work-related stress. Previous studies have shown that individuals with minimal coping skills or increased stress levels exhibit lower levels of self-management involvement, leading to poor blood glucose control and a greater likelihood of complications (Yu et al., 2020).

Self-efficacy is something that is needed to be able to cope with stress well and enable patients to carry out diabetes mellitus care for themselves (Adu et al., 2019). Stress in diabetes mellitus patients is one factor related to patient adherence to self-management behaviors. Stress can lead to a decline in the body's ability to regulate inflammation, and if this continues unchecked, it can lead to death (Marcovecchio & Chiarelli, 2012)(Downs & Faulkner, 2015).

The implementation of diabetes self-management is a major determinant of health-related impacts, such as quality of life. Patient involvement in diabetes self-management will impact health improvement. Several previous studies have also shown the importance of implementing diabetes self-management in order to improve their quality of life. Previous studies also found that the implementation of diabetes self-management is still categorized as poor, as is the quality of life for patients. Quality of life is a multidimensional concept, representing a subjective assessment of an individual's physical and mental health. Improving quality of life is a primary goal in diabetes mellitus self-management. However, because diabetes mellitus is a progressive disease and requires patient input, a patient's perception of quality of life can also worsen their diabetes self-management activities (Alsayed Hassan et al., 2022), (Habebo et al., 2020).

Several previous studies have shown a strong correlation between complications and a decreased quality of life in diabetes mellitus patients. Patients with one or more complications are more likely to experience a poorer quality of life. Microvascular complications such as retinopathy, neuropathy, and nephropathy are common complications in diabetes mellitus patients. Based on service level, primary care typically treats patients with no or fewer complications, while tertiary care typically treats

multiple complications. Therefore, the healthcare system recommends treating patients with uncomplicated diabetes mellitus in primary care, while those with complications should be treated in higher-level care (Ritonga et al., 2025).

2. PROBLEM STATEMENT AND RESEARCH QUESTIONS

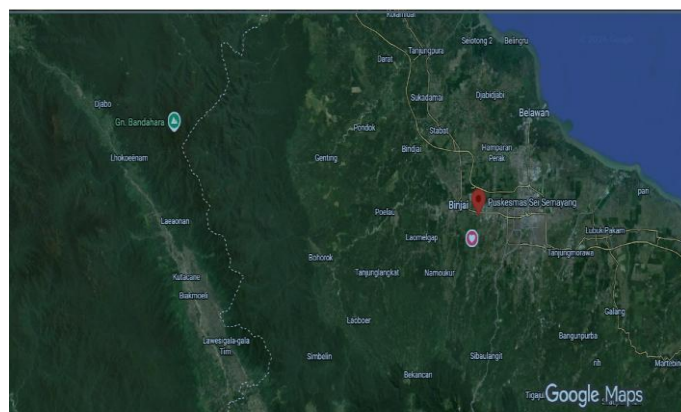
The Sei Semayang Community Health Center is divided into three working areas: Sei Semayang Village, Sumber Melati Diski (S.M. Diski) Village, and Serbajadi Village. The ten most common diseases at the Sei Semayang Community Health Center in 2022, in order, were influenza with 1,790 visits, hypertension with 1,250 visits, gastritis with 1,110 visits, dermatitis with 850 visits, diabetes mellitus with 835 visits, rheumatoid arthritis with 300 visits, headache with 180 visits, gastroenteritis with 175 visits, otitis media with 50 visits, and osteoarthritis with 45 visits (Sei Semayang Community Health Center, 2022).

At the Sei Semayang Community Health Center (Puskesmas), it was found that in two villages within the Puskesmas's working area (Sei Semayang Village and Serba Jadi Village), some diabetes mellitus patients remain uncertain about self-care management, experience stress in daily life, and have minimal understanding of diabetes mellitus self-management and self-efficacy training. These diabetes mellitus patients are prone to complications such as foot ulcers and a decreased quality of life. Therefore, patients require integrated efforts to prevent complications and improve their quality of life.

Based on this description, the research problem in this community service activity is how to improve self-efficacy in self-management and reduce stress in diabetes mellitus patients through self-management and diabetes self-efficacy training. Based on the problem formulation, this community service activity aims to:

- 1) Identify self-efficacy and stress in people with diabetes mellitus.
- 2) Implement diabetes self-management and self-efficacy training through education and mentoring for diabetes mellitus patients.

Through this activity, it is hoped that people with diabetes mellitus will experience increased self-efficacy and reduced stress in managing their diabetes mellitus.



Picture 1. Location of Sei Semayang Community Health Center, Deli Serdang Regency

3. LITERATURE REVIEW

Insulin is a hormone that plays a crucial role as an anabolic hormone. Insulin influences carbohydrate, fat, and protein metabolism. Diabetes mellitus associated with metabolic disorders affects adipose tissue, skeletal muscle, and the liver due to insulin resistance. This condition results in chronic hyperglycemia, a metabolic disorder caused by insufficient insulin secretion, impaired insulin action, or both (Antar et al., 2023). Diabetes mellitus can be divided into two types, the first type has characteristics including damage to pancreatic beta cells, absolute insulin deficiency and is caused by autoimmune, while the second type has characteristics including being caused by insulin resistance and can also be caused by impaired insulin secretion or both (Soelistijo dkk, 2024)

Soelistijo,S,A., dkk, 2024. *Pengelolaan dan Pencegahan Diabetes Mellitus Tipe 2 Dewasa di Indonesia*, PB Perkeni, ISBN: 9786025303555

Diabetes mellitus is a serious, long-term condition, prone to complications including neuropathy, retinopathy, cardiovascular disease, and diabetic foot disease, as well as psychological complications such as anxiety and depression. This condition can impact psychosocial well-being and daily functioning, leading to a worsening quality of life for patients with diabetes mellitus. The quality of life for patients with diabetes mellitus worsens as complications develop or comorbidities arise (Aarthy et al., 2021).

A good quality of life in diabetes mellitus patients is the result of successful self-management efforts based on increased self-efficacy and reduced stress. Self-management refers to the patient's ability to manage symptoms, treatment, physical and psychosocial impacts, and lifestyle changes that occur with the condition. Behaviors include physical activity, a healthy diet, self-monitoring of blood glucose, and foot care (Almutairi et al., 2020). To enable patients to practice good self-management, guidance from healthcare professionals is essential in shaping patient behavior, including goal setting, modifying actions, and collaborative planning. Self-management programs emphasize partnerships between patients and providers, encouraging accountability for achieving blood sugar target levels and preventing complications (Puzhakal et al., 2025).

Self-efficacy is an individual's belief in how they think, motivate themselves, and ultimately decide to perform a behavior to achieve a desired goal. Self-efficacy is developed through four main sources: successful experiences, the experiences of others, social persuasion, and the creation of physiological and emotional states (Bathi and Shety,2022). Experience of success refers to one's own past achievements in similar tasks, as remembered and reflected upon. Meanwhile, experience with others refers to what individuals gain by hearing and seeing about the achievements of others. Verbal persuasion refers to feedback or support provided by others. Meanwhile, the creation of physical and emotional states refers to an individual's efforts to interpret the physical and emotional conditions they experience or create through their senses (Waddington, 2023). Self-efficacy is a crucial concept for chronic disease management, as it is central to cognitive theory. Self-efficacy is also a crucial component of disease management, as it helps individuals develop behaviors that effectively manage their disease (Yi et al., 2021). Self-efficacy and an individual's ability to cope with and resolve stress in chronic illness will influence the course of the disease. Previous studies have shown a correlation between self-efficacy

and patient coping strategies in stroke, cancer, diabetes mellitus, respiratory diseases, and joint/connective tissue diseases. Self-efficacy plays a crucial and proven role in managing and reducing patient stress (Bakan & Inci, 2021). Stress is a state of balance that experiences changes or disturbances from normal (Lu et al., 2021). Poor self-management can lead to a poor quality of life for diabetes mellitus patients. Stress can be managed with strong self-efficacy, which in turn provides opportunities for better self-management. Stress is linked to compliant behavior during treatment, as unhealthy stress can lead to impaired regulation of inflammation in the body and, if not properly managed, can lead to death. Therefore, self-efficacy is a key factor in the perceived impact of stress. Individuals with high levels of self-efficacy experience less stress because they have the ability to accomplish greater feats (Gultom & Batubara, 2022).

4. METHODS

This community service activity uses a participatory action research (PAR) approach. Participatory action research (PAR) is an approach that involves the participation of the community experiencing the problem and receiving the action to create social modifications that empower the community (Cornish et al., 2023). This activity, entitled "Diabetes Self-Management and Self-Efficacy Training for Diabetes Mellitus Patients," offers a sustainable and contextual empowerment model for communities experiencing diabetes mellitus. Focusing on identifying and mobilizing the abilities of diabetes mellitus patients, this community service activity not only aims to increase self-efficacy and reduce stress in diabetes mellitus patients, but also to increase the empowerment of communities experiencing diabetes mellitus to maintain self-management in order to prevent complications and improve their quality of life. The implementation of this community service includes education, demonstrations, and redemonstrations. The community service partner is the Sei Semayang Community Health Center, Deli Serdang Regency. This activity uses 30 samples of diabetes mellitus patients obtained from two villages within the Sei Semayang Community Health Center's working area, namely Sei Semayang Village and Serba Jadi Village, with 15 diabetes mellitus patients each. The stages of self-management and self-efficacy training for diabetes mellitus patients consist of three stages of activity, as can be seen in Table 1.

Table 1. Stages of diabetes self-management and self-efficacy training for diabetes mellitus patients

Phase	Activities
Preparation	• Survey of healthcare workers, cadres, and the community in the Sei Semayang Community Health Center working area, Deli Serdang Regency • Identify problems in diabetes mellitus patients and commonly used treatments. • Review the readiness of facilities and supporting facilities for activities • Prepare and develop comprehensive and easy-to-understand training materials in booklet form • Collaborate with the Sei Semayang Community Health

	Center in managing community service partners, and then with village heads and cadres in preparing training participants.
Implementation	• Pre-test • Opening by health center personnel • Training session 1: Overview of diabetes mellitus (using lecture and question-and-answer methods) ✓ Definition of diabetes mellitus ✓ Classification of diabetes mellitus ✓ Course of diabetes mellitus ✓ Signs and symptoms of diabetes mellitus • Training session 2: Diabetes mellitus self-management (using lecture, question-and-answer methods, demonstrations, and re-demonstrations) ✓ Self-management: diet - Eating patterns - Weight ✓ Self-management: physical activity - Principles of physical activity - Information on physical activity ✓ Self-management: foot exercises and foot care - Foot exercises - Foot care ✓ Self-management: controlling blood glucose levels - Objectives - Tools and materials - Steps ✓ Self-management: stress management - Definition of stress - How to manage stress • Training session 3: Diabetes mellitus self-efficacy (using lecture, question-and-answer, demonstration, and redemonstration methods) ✓ Definition of self-efficacy ✓ Development of self-efficacy ✓ Application of self-efficacy in dealing with diabetes mellitus • Post-test
Monitoring	• Get participant feedback regarding community service activities

The community service provided participants with the opportunity to discuss the material presented and ask questions through interactive educational materials using a booklet. The booklet covered an overview of diabetes mellitus, diabetes self-management, including diet, physical activity, foot exercises and foot care, blood glucose control and stress management, and diabetes self-efficacy.

The presentation of data from this community service activity used a quantitative method with a quasi-experimental design without a group of observers. The community service provider requested consent from the

participants who participated in this activity, and those who agreed to participate signed a consent form. The pre-test and post-test evaluation used a diabetes management self-efficacy scale questionnaire with 15 questions with the lowest score of 15 and the highest score of 75 (Sturt et al., 2010), while stress was assessed using a subjective stress unit scale (SUDS) questionnaire consisting of a scale of 0 to 100 where each score of 10 contained an explanation of stress (Kim et al., 2008). Pre-test and post-test data were collected through direct interviews with each participant. The community service activity has been completed and received a completion letter from the Community Health Center. The community service provider analyzed the data of this activity using univariate and bivariate observers with the Wilcoxon test.

5. RESULTS AND DISCUSSION

a. Results

In the implementation phase, a team consisting of lecturers and students carried out self-management and self-efficacy training activities for 30 participants with details on April 28, 2026, as many as 15 participants in Sei Semayang village and on April 29, 2026, in Serba Jadi village, Sei Semayang Community Health Center Work Area, Deli Serdang Regency. The team together with health workers, cadres began the activity by sharing information with participants. After that, the team conducted a pre-test on participant characteristics, diabetes management self-efficacy, and stress using a questionnaire according to the plan that had been prepared. Then, the team conducted self-management and diabetes self-efficacy training for diabetes mellitus patients according to the plan that had been designed. After that, the team carried out a post-test on self-efficacy and stress using the same questionnaire as in the pre-test. Then, the team monitored by getting responses from participants regarding the training activities received. In general, participants stated that the training built participant comfort and a statement of willingness to continue the information and actions obtained during the training in everyday life. The team analyzed the activities using the Wilcoxon test.

The characteristics of hypertensive patients included gender, age, marital status, education, income, occupation, and duration of diabetes mellitus. The first table shows the participants, who were mostly aged 61-70 years, married, had an elementary school education, an income of <2,500,000 rupiah, worked as housewives, and had diabetes mellitus for 0-1 year. Figure 1 and Table 2 display the participant characteristics.



Figure 1. Participants in Community Service training

Table 2. Participant Characteristics

No.	Participant Characteristics	Frequency	Percentage (%)
1.	<u>Gender</u>		
	Male	2	6,7
	Female	28	93,3
2.	<u>Age (Years)</u>		
	21-30	1	3,3
	31-40	2	6,7
	41-50	4	13,3
	51-60	9	30,0
	61-70	14	46,7
3.	<u>Marital Status</u>		
	Married	21	70,0
	Widower	9	30,0
4.	<u>Education</u>		
	Did not finish elementary school	2	6,7
	Elementary School	10	33,3
	Junior High School	9	30,0
	Senior High School	9	30,0
5.	<u>Income</u>		
	< 2.500.000	23	76,7
	2.500 - 5.000.000	7	23,3
6.	<u>Type of work</u>		
	Housewife	22	73,3
	Private employees	1	3,3
	Self-employed	4	13,3
	Etc	3	10,0
7.	<u>Long-term DM (Years)</u>		
	0 - < 1	22	73,3
	1 - < 5	3	3,3
	5 - < 10	3	13,3
	15 - < 20	1	10,0
	20 - < 25	2	5,0

Community service participants conducted pre- and post-tests to measure self-efficacy using a diabetes management self-efficacy scale questionnaire and stress using a subjective stress unit scale questionnaire. Figure 2 displays the pre- and post-test activities of community service.



Figure 2. Pre-Test and Post-Test Activities for Community Service

The community service provided diabetes self-management and self-efficacy training in three sessions. The first session covered an overview of diabetes mellitus using a lecture and question-and-answer method. Figure 3 displays the training activities for the first session.



Figure 3. First session on the description of diabetes mellitus

The second session, on diabetes mellitus self-management, covered diet, physical activity, foot exercises and foot care, blood glucose control, and stress management. The lecture, question-and-answer session, demonstration, and redemonstration methods were used. The demonstration and redemonstration methods covered foot exercises and self-measuring blood glucose levels. Figure 4 displays the second session on diabetes mellitus self-management.



Figure 4. Second session on self-management of diabetes mellitus

The third session on diabetes self-efficacy covered the definition of self-efficacy, developing self-efficacy, and applying it to diabetes mellitus, using lecture, question-and-answer, demonstration, and redemonstration methods. The demonstration and redemonstration methods were used to create physical and emotional states through visualization using classical music by Johann Sebastian Bach from YouTube using speakers. Figure 5 displays the third session on diabetes self-efficacy.



Figure 5. Third session regarding diabetes self-efficacy

After the training, there was an increase in self-efficacy and a decrease in stress. Table 2 illustrated these results.

Table 2. Self-Efficacy and Stress Scores

Scores	Min	Max	Mean	SD
Pre-Training Self-Efficacy	32	61	48,33	8,13
Post-Training Self-Efficacy	39	68	55,23	7,69
Pre-Training Stress Score	10	60	36,00	11,63
Post-Training Stress Score	0	40	22.00	9,71

The community service provider conducted a Shapiro-Wilk normality test on the activity results and found that only the post-test self-efficacy data were normally distributed. Therefore, to determine the effect of self-management training and diabetes self-efficacy on the immediate post-intervention, the community service provider conducted

a bivariate analysis using the Wilcoxon test. Table 3 presents the impact of self-management training and diabetes self-efficacy on self-efficacy and stress in patients with diabetes mellitus.

Table 3. Effect of Self-Management Training and Diabetes Self-Efficacy

Effect	Mean difference	P
Self-Efficacy before and after training	6,90	0,0001
Stress before and after training	13,67	0,0001

After receiving the post-test results for this training, the community service provider conducted monitoring by asking participants for their feedback on the training. Based on all the responses, it can be generally concluded that participants felt the training improved their well-being and expressed a willingness to continue the training in their daily lives.

b. Discussion

The goal of community service was to help diabetes mellitus patients experience increased self-efficacy and reduced stress through self-management and diabetes self-efficacy training. Findings from this activity indicate that the training significantly increased self-efficacy and reduced stress in diabetes mellitus patients.

The majority of participants were women. Gender trends in previous studies also showed similar result (Puig-García et al., 2023), (Pheiffer et al., 2021). The majority of diabetes mellitus patients were aged 61-70 years. Previous studies have shown a similar trend, with the majority of those aged 65 years and above experiencing diabetes (Wang et al., 2021). The majority of diabetes mellitus patients were married. This is consistent with previous studies that found that widowed or widowed participants were less likely to develop diabetes than divorced participants, and divorced participants were less likely to develop diabetes than married participants (Karimi et al., 2025). Most participants had a primary school education. This is similar to previous studies that found that higher education levels lower the risk of developing diabetes.

(Reis et al., 2022). Some participants had low incomes, and none had high incomes. This is similar to previous studies that found that diabetes development increases in low- and middle-income areas (Zhou et al., 2024). Most diabetes mellitus patients worked as housewives or were unemployed. This finding aligns with previous studies (Mirzaei et al., 2020). Patients with diabetes mellitus have a disease duration of 0 to 1 year. These results are somewhat similar to previous studies, where the average duration of diabetes mellitus in men was 0.7 years and in women 1.7 years. The largest differences occurred in men's 30s and women's 50s (Cho et al., 2019).

Self-efficacy is a person's belief in their ability to successfully perform a specific task or achieve a desired outcome. Self-efficacy plays a crucial role in developing health awareness, especially in patients with chronic illnesses. This is because self-efficacy is a system for

understanding and predicting behavior and a key determinant of behavioral change. Improved behavioral change is strongly associated with strong beliefs. Increased patient self-efficacy is important for self-control, improving diabetes self-management, and controlling blood glucose levels (Saleem et al., 2025).

Self-efficacy measurement using the diabetes management self-efficacy scale includes 15 questions with a score scale range of up to 5, with the lowest score being 15 and the highest score being 75 (Sturt et al., 2010). The results of community service activities showed that the self-efficacy of diabetes mellitus patients before training, when divided into three categories, ranges from low to high self-efficacy with an average of moderate self-efficacy. Likewise, after training, there is an increase in self-efficacy scores but still displays low to high self-efficacy with an average of moderate self-efficacy. Previous studies show a similar picture to this activity where there is an increase in self-efficacy scores after an educational program in diabetes control at a primary health center (Yunis et al., 2024).

Stress is a state of disturbed balance, including both general and local stress. Specific stressors can potentially lead to local stress, while stress levels exceeding tolerance levels can stimulate the hypothalamic-pituitary-adrenal axis and produce a systemic stress reaction. Optimal stress levels are vital for developing biological defenses to ensure normal functioning (Lu et al., 2021). Stress negatively impacts a person's cognition, feelings, and actions. Individuals experiencing greater stress are more likely to experience negative perceptions of their own capacity, feel a lack of control over their own health, and may respond to situations by avoiding problems rather than optimizing intellectual adaptation to address issues related to diabetes self-management (Guo et al., 2019).

Stress was measured using the Subjective Stress Unit Scale (SUDS), a single-item subjective stress measurement scale. Scores range from 0 to 100. Stress categories include mild (10 to 40), moderate (50 to 60), and severe (70 to 100) (Morrow et al., 2019). The results of the community service activities showed that before the training, stress scores were mild to moderate, with an average stress level of mild. After the training, stress scores ranged from no stress to mild stress, with an average stress level of mild. Previous studies have shown a similar trend, with a decrease in stress scores after a health promotion program on diabetes self-management (Nooseisai et al., 2021).

The study results showed that the difference in self-efficacy and stress scores before and after training was 6.90 for self-efficacy and 13.67 for stress. The Wilcoxon test showed a significant effect with a p-value of 0.0001 for each variable. Individuals react to the environment after assessing the relationship and effect of an event on them, both physiologically and mentally, and after estimating the community's response and their motivation. A physiological description of self-efficacy and stress is that when an individual is under pressure, the central nervous system releases hormones called catecholamines. When a person's self-efficacy decreases, whether to a moderate or low level, the release of hormones increases in order to complete tasks and anticipate future problems. Mentally, individuals believe that complex tasks, after thinking about them, will create stressful situations, and vice versa. In community responses, if others successfully convey ordinary change actions skillfully,

then the individual will be able to carry out the change themselves. Meanwhile, motivation relates to an individual's capacity to perceive a task as an opportunity or a threat, which will impact the individual's motivation to pursue it (Gultom & Batubara, 2022)

6. CONCLUSION

Diabetes self-management and self-efficacy training in diabetes mellitus patients can improve self-efficacy scores and reduce stress scores. Diabetes self-management and self-efficacy training activities can contribute to nursing interventions as complementary therapies to improve self-efficacy and reduce stress in diabetes mellitus patients in the Sei Semayang Community Health Center, Deli Serdang Regency. Sustainability of this training through regular mentoring of diabetes mellitus patients by health workers is necessary to maintain and improve self-efficacy and reduce their stress in carrying out diabetes self-management so that blood glucose levels can remain under control and their quality of life improves.

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