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ABSTRACT

Diabetes is a chronic condition that cannot be cured but can be controlled, meaning that if diagnosed with diabetes for life, DM sufferers can live healthy lives with DM as long as they are obedient and controlled. This study used a quasy experimental research design pre-post-test design with a control group and the sampling technique was carried out using a non-probability sampling method through a quota sampling technique. Study analysis was performed using paired t-test and independent t-test to confirm comparisons between the two study groups. Based on the results of the research analysis, it was found that the respondent's blood glucose levels in the treatment group averaged 336 mg / dl (uncontrolled) at the pre-test and 293 mg / dl (uncontrolled) at the post-test. Controlled), but on average the results show a decrease in the respondent's blood sugar value. The results of the study in the control group showed that the value of blood glucose was 298 mg / dl (uncontrolled) for the pre-test mean and 296 mg / dl (uncontrolled) for the post-test. The results of the research analysis showed that the respondents' blood glucose levels in the treatment group averaged 336 mg / dl (uncontrolled) at the pre-test and 293 mg / dl (uncontrolled) at the post-test. Controlled). Uncontrolled glucose can be managed through general nutritional management, medication, exercise, control, and education.

Keywords : Diabetes, Group Support, Lifestyle, Management, Pandemic Era

INTRODUCTION

Diabetes mellitus can become serious if left untreated and can lead to chronic conditions that are dangerous to the sufferer's health. Diabetes is a chronic condition that cannot be cured but can be controlled, meaning that if diagnosed with diabetes for life, dm sufferers can live healthy lives with dm as long as they are obedient and controlled.

WHO estimates that 194 million people, or 5.1% of the world's 3.8 billion population aged 20-79 years have diabetes, and by 2025 the number of people with diabetes will increase to 339 million. WHO estimates that sufferers in Indonesia will increase from 8.4 million in 2000 to 21.3 million in 2030.

The high impact of diabetes is not only death, but lifelong disease that is detrimental to patient health(Atlas, 2019). Therefore it is necessary to control blood sugar levels to prevent or suppress

complications of diabetes, and one of the indicators of successful diabetes control is the use of blood sugar levels(Soelistijo *et al.*, 2019).

Diabetes cannot be cured, but the five pillars of diabetes management: education, nutrition, medication, physical activity, and blood sugar control can lower a patient's blood glucose. Supporting patient awareness and emotional and social aspects in the family and community can play an important role in improving adherence and clinical outcomes, because providing information alone does not enable diabetics to improve adherence and achieve patient management and treatment goals. Therefore, support groups should be developed in the context of management and management of treatment for diabetes sufferers.

MATERIAL AND METHODS

This study used a quasy experimental research design pre post-test design with control group. This study used two groups of respondents, namely the treatment group and the control group. The treatment group received the group support lifestyle modification (g-slim) intervention and received general interventions, and the control group received only the interventions that were normally accepted. In this study, the sampling technique was carried out using a non-probability sampling method through a quota sampling technique. Study analyzes were performed using paired t-test to identify differences before and after intervention and independent t-test to confirm comparisons between the two study groups.

RESULTS AND DISCUSSION

1. Blood Glucose Management in Group I

Characteristics of respondents indicate that at the time of the pre-test all respondents (100%) in the treatment group had uncontrolled blood glucose, and after the post-test, all respondents (100%) had uncontrolled blood glucose. The characteristics of respondents based on Table 1 indicate that the treatment group had a mean blood glucose value of 336 mg / dl (uncontrolled) at the pre-test and 293 mg / dl (uncontrolled) at the post-test. But on average, the results showed that the respondents' blood glucose levels had decreased.

Table 1 Characteristics of blood glucose of treatment group respondents

Respondents	Blood Glucose Levels	
	Pre-test	Post-test
1.	245 mg/dl	210 mg/dl
2.	331 mg/dl	252 mg/dl
3.	289 mg/dl	274 mg/dl
4.	312 mg/dl	312 mg/dl
5.	400 mg/dl	334 mg/dl

Respondents	Blood Glucose Levels	
	Pre-test	Post-test
6.	500 mg/dl	341 mg/dl
7.	257 mg/dl	246 mg/dl
8.	291 mg/dl	217 mg/dl
9.	385 mg/dl	307 mg/dl
10.	295 mg/dl	297 mg/dl
11.	223 mg/dl	211 mg/dl
12.	290 mg/dl	235 mg/dl
13.	300 mg/dl	254 mg/dl
14.	265 mg/dl	311 mg/dl
15.	485 mg/dl	425 mg/dl
16.	311 mg/dl	307 mg/dl
17.	421 mg/dl	371 mg/dl
18.	367 mg/dl	352 mg/dl
19.	426 mg/dl	321 mg/dl
Mean	336.47	293.53
Median	311.00	307.00
Variance	6375.596	3409.485
Std. Deviation	79.847	58.391
Minimum	223	210
Maximum	500	425

The results showed that blood glucose in all respondents in the treatment group was not controlled during the pre-test. Likewise, at the time of the post test, the respondent's blood glucose was still uncontrolled. The results showed that all respondents had blood sugar levels above 200 mg / dl.

Management of diabetes mellitus globally is currently starting to turn in a good direction but cases that are handled inappropriately are still found. Diabetes mellitus prevention requires an integrated and holistic approach based on the origin of the disease, inadequate glycemic control can significantly increase the use of health care resources, medical costs and impact mortality rates. Effective self-management, including lifestyle modification, is very important to motivate people with diabetes(Lambrinou, Hansen and Beulens, 2019).

The condition of someone with a blood sugar level of 200 mg / dl or more is an indicator that can identify someone with diabetes. Diabetics with blood sugar levels above 200 mg / dl can be caused by various factors, both internal and external to the patient. The uncontrolled condition of blood sugar actually shows that diabetics cannot change their lifestyle in the form of diet, medicine, exercise, control and education.

Based on the results of the study, the characteristics of the respondents were that almost all of them belonged to the approaching old age group, namely the majority of respondents aged between 45 and 59 years, worked as farmers and had a basic education (SD).

Handling diabetes, especially in the puskesmas environment, is a form of primary health care, this service is a basic service that focuses on managing diabetes management which functions as a health education and counseling service as well as routine blood glucose check services. Efforts to implement diabetes self-management encountered several obstacles, such as those associated with low patient awareness of the disease, lack of knowledge and skills in diabetes management, lack of motivation to manage diabetes, lack of human resources, and lack of social participation(Pamungkas *et al.*, 2019).

The condition of the respondent with the characteristics in accordance with this fact greatly affects an individual's ability to carry out self-care related to the disease he is suffering from. Diabetics with this background experience many problems, both economically and in their level of knowledge, which can affect their ability to control blood sugar. There are some respondents who can be controlled, but many of them cannot control their blood sugar because of these factors.

2. Blood Glucose Management in Group II

Characteristics of respondents indicate that all respondents (100%) in the control group did not control their blood glucose during the pre-test, and after the examination (post-test), all respondents (100%) found that their blood glucose was still uncontrolled. The characteristics of respondents based on Table 5.13 show that the mean blood glucose value of the control group at the time of pre-test was 298 mg / dl (uncontrolled) and the post-test had a blood glucose value of 296 mg / dl (uncontrolled). But on average, the results showed that the respondents' blood glucose levels had decreased.

Table 2 Characteristics of blood glucose control group respondents

Respondents	Blood Glucose Levels	
	Pre-test	Post-test

Respondents	Blood Glucose Levels	
	Pre-test	Post-test
1.	311 mg/dl	293 mg/dl
2.	321 mg/dl	290 mg/dl
3.	221 mg/dl	246 mg/dl
4.	271 mg/dl	320 mg/dl
5.	270 mg/dl	225 mg/dl
6.	300 mg/dl	242 mg/dl
7.	400 mg/dl	380 mg/dl
8.	271 mg/dl	280 mg/dl
9.	251 mg/dl	269 mg/dl
10.	371 mg/dl	302 mg/dl
11.	280 mg/dl	345 mg/dl
12.	350 mg/dl	380 mg/dl
13.	432 mg/dl	389 mg/dl
14.	271 mg/dl	352 mg/dl
15.	231 mg/dl	233 mg/dl
16.	300 mg/dl	268 mg/dl
17.	250 mg/dl	231 mg/dl
18.	256 mg/dl	243 mg/dl
19.	320 mg/dl	342 mg/dl
Mean	298.79	296.32

Respondents	Blood Glucose Levels	
	Pre-test	Post-test
Median	280.00	290.00
Variance	3197.842	3016.561
Std. Deviation	56.549	54.923
Minimum	221	225
Maximum	432	389

The characteristics of respondents based on the results of the study indicate that all respondents in the control group at the time of pre-test had uncontrolled blood glucose and all respondents at the post-test also had uncontrolled blood glucose. At the pre-test, the mean value of blood glucose in the control group was 298 mg / dl, and at the post-test the blood glucose value was 296 mg / dl.

Recommended health care includes education and diabetes self-management support (DSMES) which has been successful in improving glycemic control in diabetics. Diabetes can be said to have almost no cure, but it can be controlled. If not controlled, high blood glucose can damage the eyes, heart, kidneys, nervous system and other organs. The combination of high blood glucose coupled with uncontrolled high blood pressure and other risk factors can increase the risk of heart disease, stroke, kidney disease, and other complications of diabetes.

The recommended health care for diabetics is treatment that can include aspects of education and independent diabetes care which aims to improve blood glucose control abilities in diabetics. Diabetes may have only a few models of treatment and care, but diabetes can be controlled. Uncontrolled high blood glucose can impact the eyes, heart, kidneys, nervous system and other organs. The combination of high blood glucose conditions with uncontrolled high blood pressure and other risk factors can increase the risk of heart disease, stroke, kidney disease, and other complications of diabetes(Wiesman, 2019).

Uncontrolled blood glucose levels are an indicator that a person has problems related to the treatment of their disease. Diabetics with blood glucose levels above 200 mg / dl indicate that they are unable to control their blood glucose. This condition indicates that the patient has experienced failures related to nutritional management, medication, exercise, control, and education which impact on uncontrolled blood glucose status.

The characteristics of respondents based on the results of the study indicate that almost all respondents belong to the group nearing old age, namely 45-59 years, most of them work as housewives and farmers, and almost all respondents have an elementary school education (SD).

Education and support for self-care is very important for people with chronic conditions such as diabetes, so special education is needed related to self-management which is adjusted to several sufferers such as medical history, age, beliefs about health and attitudes, knowledge, physical

limitations, family support, financial status and socio-culture(Lambrinou, Hansen and Beulens, 2019).

The factors of age, occupation, and education are one of the causes of difficulty in managing care and treatment when someone is attacked or suffering from illness. The care and treatment of diabetics really requires a strong support system in terms of mental and physical readiness of the individual as well as the immediate environment. The existence of strong support will help diabetics manage their diabetes management well, while the lack of support can affect the poor condition of diabetics.

3. Effectiveness of Group Support Lifestyle Modification

Based on the results of the research analysis, it was found that the respondent's blood glucose level in the treatment group averaged 336 mg / dl (uncontrolled) at the pre-test and 293 mg / dl (uncontrolled) at the post-test. Controlled), but on average the results show a decrease in the respondent's blood sugar value. The results of the study in the control group showed that the value of blood glucose was 298 mg / dl (uncontrolled) for the pre-test mean and 296 mg / dl (uncontrolled) for the post-test.

Diabetes is a lifelong disease and along with the progressive progression of the disease, there are acute and chronic complications that continue to develop, another thing that happens to sufferers is the effect on their self-confidence so that gradually reduce self-management behavior and decrease adherence to treatment(Zheng *et al.*, 2019).Comprehensive diabetes management is needed to prevent complications that include five pillars, namely meal planning, physical exercise, medication, counseling, and monitoring of glucose levels(Hariyono and Romli, 2020).

The change in the condition of a person with diabetes depends entirely on the individual's efforts or the individual's willingness to restore or control the disease. Diabetics with adequate support can show changes related to their condition, one of which is changes in blood glucose levels. Although blood sugar levels do not show direct changes, with the support of support groups related to general nutrition management, drugs, exercise, control, and education can effectively change the lifestyle of people with diabetes so that their blood glucose is controlled.

Based on the results of the study, it was found that the respondent's blood glucose level in the treatment group averaged 336 mg / dl (uncontrolled) at the pre-test and 293 mg / dl (uncontrolled) at the post test. Controlled), but on average the results show a decrease in the respondent's blood sugar value. The results of the study in the control group showed that the value of blood glucose was 298 mg / dl (uncontrolled) for the pre-test mean and 296 mg / dl (uncontrolled) for the post-test.

Lifestyle management is a fundamental aspect of diabetes care and includes diabetes self-management education and support (DSMES), medical nutritional therapy (MNT), physical activity, smoking cessation counseling, and psychosocial care. Patients and care providers must focus together on how to optimize the outcome of a comprehensive medical evaluation and determine the next follow-up to improve diabetes care.

Lifestyle management is a fundamental aspect of diabetes management which includes diabetes self-management education and support (DSMES), medical nutrition therapy (MNT), physical activity, smoking cessation counseling, and psychosocial therapy. Patients and medical personnel must focus together on how to optimize the results of a comprehensive medical evaluation of the patient's condition and immediately determine follow-up related to lifestyle modifications in accordance with the goal of improving diabetes treatment(Care and Suppl, 2019).

The main problem for diabetics is related to uncontrolled blood glucose control and glucose is a trigger for other problems in diabetics. Diabetes management can be done through general nutrition management, medicine, exercise, control, and education. The uncontrolled blood glucose condition causes various complications in diabetics, so if the blood glucose value is more than 200mg / dl, the patient really needs to do extra in taking medication and other management to avoid complications due to poor blood sugar control.

CONCLUSION

The results of the study in the control group showed that the value of blood glucose was 298 mg / dl (uncontrolled) for the pre-test mean and 296 mg / dl (uncontrolled) for the post-test. The results of the research analysis showed that the respondents' blood glucose levels in the treatment group averaged 336 mg / dl (uncontrolled) at the pre-test and 293 mg / dl (uncontrolled) at the post-test. Controlled). Diabetes management can be done through general nutrition management, medicine, exercise, control, and education. The uncontrolled blood glucose condition causes various complications in diabetics, so if the blood glucose value is more than 200mg / dl, the patient really needs to do extra in taking medication and other management to avoid complications due to poor blood sugar control.

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