

patients with high blood sugar is Progressive Muscle Relaxation Exercises which can help reduce HbA1C levels (Tahereh Najafi Ghezeljeh, 2017). The various benefits provided by this exercise include reducing anxiety, improving sleep quality (insomnia) and increasing blood pressure (Putri & Bayhakki, 2016). Apart from that, there are also activities that can have a calming effect, namely hearing the sound of the Murottal Qur'an. Based on a study conducted by Al- Qadhi in the United States, precisely at a large clinic in Florida, listening to verses from the holy Koran provides significant physical changes. What the research subjects felt was a decrease in depression, sadness and peace of mind. The results of studies conducted show that reading the holy verses of the Koran can produce calm and cure diseases by 97%. (AL Qadhi et al., 2018).

Murottal Al-Qur'an is the chanting of the holy verses of the Al-Qur'an which has an influence on the human body system so that when we listen to it our bodies will feel very big changes. Chanting the holy verses of the Koran has various excellent benefits, especially for human health (Susilawati, 2020). This happens because the chanting given by the Al-Qur'an can cause the endorphin hormone to stimulate a sense of comfort in the human body so that those who experience it feel calm. That is why Murottal Al-Qur'an is called part of non-

pharmacological techniques because it can provide solutions in an effort to help the healing process of various diseases, especially Diabetes Mellitus. Based on a preliminary study of people with diabetes mellitus in the Mangkubumi Community Health Center working area, there is no implementation of progressive muscle training accompanied by Murottal Al-Qur'an, patients who often carry out control are only given medication and given guidance about diabetes mellitus and physical activities that can be done inside. House. From the above phenomenon, researchers are interested in conducting research on "The Effect of Progressive Muscle Relaxation Exercises accompanied by Murottal Al-Qur'an on changes in blood sugar values in Type II Diabetes Mellitus patients at the Mangkubumi Community Health Center."

RESEARCH METHOD

This research design uses a quasi-experiment in the form of a one group pre-post test design with a purposive sampling technique by taking a sample of 38 people from the intervention group.

RESEARCH RESULT AND DISCUSSION

RESULT

Based on Table 1, the dominant characteristics of respondents are 4 people

aged 55 years, 4 people aged 63 years and 4 people aged 69 years with a percentage of 10.5%.

Table 1. Respondent characteristics based on age

Age	Frequency	Percentage
38	2	5.3
41	1	2.6
43	1	2.6
48	1	2.6
49	2	5.3
51	2	5.3
52	1	2.6
53	1	2.6
54	1	2.6
55	4	10.5
56	2	5.3
58	3	7.9
60	1	2.6
61	1	2.6
62	1	2.6
63	4	10.5
64	2	5.3
66	1	2.6
68	1	2.6
69	4	10.5
70	1	2.6
72	1	2.6
Amount	38	100.0

Table 2. Characteristics of Respondents based on Gender of Type II Diabetes Mellitus sufferers at Mangkubumi Health Center

Gender	Frequency	Percentage
Man	12	31.6
Woman	26	68.4
Amount	38	100.0

Based on table 2, the results obtained from 38 respondents with diabetes mellitus, 26 women dominated with a percentage of 68.4% and 12 men with a percentage of 31.6%.

Table 3. Characteristics of Respondents Based on Length of Suffering from Diabetes Mellitus at Mangkubumi Health Center

Long Suffering From Diabetes Mellitus	Frequency	Percentage
< 5 Years	30	78.9
> 5 Years	8	21.1
Amount	38	100.0

Based on table 3, the results showed that 30 people had DM < 5 years and 8 people had DM > 5 year.

Table 4. Data results Paired T - test

Pretest & Posttest Blood Sugar Values	Mean	Std Deviation	Std Error	P = value
	10,868	12,868	2,087	0,000

Based on Table 4, the data results were carried out using the Paired T - test before and after the intervention was given. The results of the Paired T - test in the intervention group showed that in the intervention group the value of $p < 0.05$, namely $p = 0.000$, which means that the intervention carried out had an effect in reducing blood sugar values before the intervention was given with blood sugar values after the intervention was carried out for 14 day.

DISCUSSION

1) Age

Respondents who suffered from diabetes mellitus were aged 55 years, 63

years and 69 years, 12 people out of a total of 38 respondents. The results of this research are in line with research conducted by (Komariah & Rahayu, 2020), which shows that the majority of type 2 DM patients are aged 46 – 65 years with a percentage of 53.8%. This is supported by changes in metabolism due to increasing age where carbohydrates and changes in insulin release are influenced by blood glucose and inhibition of the release of glucose into cells because it is influenced by insulin. (Rosada & Pakarti, 2024)

2) Gender

Based on research, the majority of respondents were female, in the intervention group there were 26 people. The incidence of DM in women is higher than men. The results of this research are in line with research conducted by (Meidikayanti & Wahyuni, 2017), which shows that the majority of respondents were female with a total of 42 people. The hormones estrogen and progesterone have the ability to increase the insulin response in the blood. When women enter menopause, the body's response to insulin decreases due to low estrogen & progesterone hormones. Apart from that, there is the factor that women's body weight is often not ideal, which can reduce insulin response sensitivity.

3) Long Suffering

Based on research, it shows that the majority of respondents had suffered from diabetes for less than 5 years, with the number in the intervention group being 30 people. The results of this research are in line with other research conducted by (Nusantoro & Listyaningsih, 2018), that the majority of respondents who had suffered from diabetes for 1 - 3 years were 17 people.

The test results used Paired Sample T - Test and obtained a value of $p = 0.000$, which means that the blood sugar value before and after Progressive Muscle Relaxation Exercise accompanied by Murottal Al - Qur'an there was a change in blood sugar value, meaning there was an influence of Progressive Muscle Relaxation Exercise accompanied by Murottal Al-Qur'an on changes in blood sugar values. The research results above are in line with the research results (Hermanto, 2020), with a research topic regarding the effect of progressive muscle relaxation on blood glucose levels and ankle brachial index diabetes mellitus II values with research results that there was a significant difference in blood sugar values before and after the intervention (P value = 0.000). Meanwhile, in the ABI (Ankle Branchial Index) value, there was no significant difference either before or after.

CONCLUSION

Based on the results of research carried out for 14 days on 38 respondents, it can be concluded that: There are salient characteristics of the 38 respondents, there is an influence of Progressive Muscle Relaxation Exercise accompanied by Murottal Al-Qur'an, there are changes in blood sugar values before and after being given the Progressive Muscle Relaxation Exercise intervention accompanied by Murottal Al-Qur'an.

Progressive Muscle Relaxation Exercise accompanied by Murottal Al-Qur'an can be used as a scheduled activity in nursing intervention as an alternative (non- pharmacological) treatment, as a reference in the learning and teaching process in efforts to prevent diabetes mellitus.

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