

Research Article

The Effect of Benson and Murottal Al-Qur'an Relaxation Therapy Surah Ar-Rahman on the Quality of Life of Diabetes Mellitus Patients in the Kaliwungu Kudus Health Center Area

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Abstract. Diabetes Mellitus is a chronic disease that can reduce the quality of life of patients from physical, psychological, social, and environmental aspects. This study aims to analyze the effect of the combination of Benson relaxation therapy and the murottal Al-Qur'an Surat Ar-Rahman on the quality of life of Diabetes Mellitus patients in the working area of the Kaliwungu Kudus Health Center with a quasi-experimental pretest–posttest control group design. A total of 36 respondents were divided into intervention and control groups of 18 people each, with measurements using WHOQOL-BREF. The results showed that the median quality of life of the intervention group increased from 43.00 to 78.13 after seven days of intervention with a significant Wilcoxon test ($p=0.000$), while the control group showed no significant change with a median of 39.00 to 40.13 ($p=0.068$). The Mann–Whitney test showed significant differences between the two groups ($p=0.000$), so it can be concluded that the combination of Benson relaxation therapy and Qur'anic murottal is effective in improving the quality of life of Diabetes Mellitus patients and has the potential to be applied as a complementary intervention in nursing practice.

Keywords: Benson Relaxation Therapy; Complementary Therapy; Diabetes Mellitus Patients; Murottal Surah Ar-Rahman; Quality of Life.

1. Introduction

In Indonesia, Diabetes Mellitus cases have experienced a significant spike in prevalence, from 6.9% in 2013 to 10.9% in 2018 (Ministry of Health, 2018). In Central Java province, the number of Diabetes Mellitus sufferers was recorded at 624,082 people in 2023 by ranking third in the Non-Communicable Disease (NCD) category, with a percentage of 9.59% of the total new NCD cases reported (Central Java Health Office, 2023). Data from the Kudus Regency Health Office in 2023 recorded that the number of people with Diabetes Mellitus in the Kudus area reached 18,329 people, including 1,437 people in the Kaliwungu Kudus Health Center working area (Kudus Regency Health Office, 2023).

Diabetes Mellitus is a long-term disease that affects the glucose metabolism process and can lead to a variety of serious complications if not treated appropriately. These complications not only affect physical health, but can also have a major impact on the psychological and social condition of the patient. Research by Nigussie et al. (2023) in Ethiopia revealed that 42.3% of patients with type 2 Diabetes Mellitus experienced depressive symptoms, while another 40.4% experienced anxiety. The findings show a high prevalence of psychological disorders in people with diabetes, which contributes significantly to poor self-management skills and a decrease in patients' quality of life.

A number of studies reveal that psychological disorders have a significant influence on the decline in the quality of life of people with Diabetes Mellitus. Research conducted by Suharsono et al. (2025) on 250 DM patients in the Central Java region showed that 50.4% of

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respondents experienced psychological distress at a moderate level and 16.0% at a high level. In addition, 55.2% of patients had a moderate quality of life, while the other 20.8% were relatively low.

Research conducted by Saputri et al. (2025) at the Potroyudan Jepara Elderly Social Service Home showed that 58.8% of respondents had a poor quality of life, and there was a strong relationship between emotional health and quality of life ($r = 0.702$; $p = 0.000$). These findings confirm that emotional disorders such as stress, anxiety, and depression can reduce an individual's ability to manage their health conditions, thus having a direct impact on a decrease in quality of life.

In addition to psychological factors, low quality of life is also strongly associated with the onset of chronic complications. In a study by Tamornpark et al. (2022) in Northern Thailand, similar results were also found with a total of 967 respondents. In the study, as many as 49.4% of DM patients reported poor to moderate quality of life. According to further analysis, most of the patients were only in the moderate category in the physical domain (90.1%) and in the mental domain (54.7%). Furthermore, complications such as diabetic nephropathy proved to be an important factor that lowered quality of life, and patients with nephropathy had a 7.41 times greater risk of experiencing a low quality of life than patients without complications. Chronic complications have a huge role in worsening the quality of life of diabetic patients according to these findings.

Meanwhile, the murottal of the Qur'an Surat Ar-Rahman uses the chanting of holy verses to create a calm and relaxed atmosphere. Research shows that listening to murottal can increase the release of endorphins, lower cortisol levels, and provide peace of mind. These effects directly help reduce the activity of the sympathetic nervous system, stabilize blood sugar levels, and create emotional balance in diabetic patients (Sapiatun et al., 2023).

A study conducted by Rahmatia et al. (2020) on 40 elderly people with type 2 diabetes mellitus in the working area of the Jongaya Health Center, Makassar City, found that the group that received Benson's relaxation therapy combined with the Qur'anic murottal for seven days showed a significant decrease in blood sugar levels ($p=0.001$). In contrast, the control group that was given only Benson therapy did not experience a significant decrease ($p=0.293$). These results indicate that the combination of these interventions has the potential to support more effective control of blood glucose levels, so that it can contribute to improving the quality of life of Diabetes Mellitus patients.

The initial survey conducted in February 2025 in the working area of the Kaliwungu Kudus Health Center involved six patients with Diabetes Mellitus with interviews using the Indonesian version of WHOQOL-BREF questions. The measurement results showed that the average physical domain score was 46, with a minimum score of 35 and a maximum of 58, which fell into the low category (categories: low = 26-60, medium = 61-95, high = 96-130). In the psychological domain, an average score of 42 (range 30–55) was obtained, which is also classified as a low category. Meanwhile, the social domain showed an average score of 50 (range 38-65) which was in the medium category, and the environmental domain showed an average score of 58 (range 45-70) which was also categorized as moderate. These results show that the quality of life of DM patients in the region is still low, especially in physical and psychological aspects.

2. Literature Review

Combining Benson's relaxation therapy with Qur'anic murottal in the management of diabetes mellitus is based on the theory that a combination of psychophysiological and spiritual interventions can have a greater positive impact on patients' quality of life. Several studies have shown that Benson relaxation is able to reduce anxiety, improve sleep quality, and stabilize blood sugar levels, while murottal has been shown to be effective in reducing stress and improving overall well-being. This integrated approach opens up opportunities for the development of more holistic therapy protocols and focuses on improving various aspects of the quality of life of diabetic patients (Rahmatia et al., 2020).

Several studies have proven that spiritual interventions and relaxation have a positive impact on the psychological and physiological condition of patients with chronic diseases, including diabetes mellitus. For example, a study by Rohmawati & Helmi, (2020) at A. Yani Islamic Hospital Surabaya showed that Benson's relaxation-based spiritual mindfulness was able to significantly reduce anxiety and blood sugar levels in people with type 2 diabetes. With a quasi-experimental design and 60 respondents, the results of this study showed a decrease in anxiety ($p = 0.000$) and blood sugar ($p = 0.000$) in the group receiving therapy compared to the control group that did not experience significant changes ($p = 1.00$ and $p = 0.48$).

In addition, a study by Zephanie et al. (2025) at the Kedaton Inpatient Health Center, Bandar Lampung, used a pre-experimental design on 40 patients with type 2 diabetes. After 20 days of Benson relaxation therapy, the percentage of patients with blood sugar levels below 200 mg/dL increased from 15% to 77.5% with a $p = 0.000$ value, showing a very significant therapeutic effect in lowering blood sugar and improving the patient's quality of life.

On the other hand, research by Mukhtar et al. (2022) at Bhayangkara Hospital Makassar revealed that Qur'anic murottal therapy is effective in reducing anxiety in patients with type II diabetes mellitus. With 15 respondents undergoing therapy for two weeks, the majority of patients switched from severe and very severe anxiety to mild anxiety, with a significant decrease in anxiety scores ($p = 0.0001$). This shows that murottal therapy makes a positive contribution to the psychological quality of life of patients.

Overall, the findings indicate that Benson's relaxation therapy and Qur'anic murottal can significantly improve the quality of life of patients with diabetes mellitus. Both therapies are able to reduce anxiety, improve sleep patterns, and help stabilize blood sugar levels. With a holistic non-pharmacological approach, this intervention is worth considering as part of a comprehensive treatment to support the physical and psychological well-being of diabetic patients.

3. Research Method

This type of research is included in quantitative research with quasi-experimental methods (pseudo-experiments). The design used was a pretest-posttest with a control group, which measured dependent variables (quality of life) both before (pretest) and after (posttest). The population in this study is people with Diabetes Mellitus who participate in prolans activities in the work area of the Kaliwungu Kudus Health Center as many as 40 people. Based on calculations using the Krejcie and Morgan formula, a sample of 36.31 respondents was obtained. Because the number of samples must be in the form of a whole number, the results of the calculation were rounded to 36 respondents from the total population of 40 people. Thus, this study took 36 respondents as a sample which was divided into two groups, namely 18 respondents for the intervention group and 18 respondents for the control group. The sampling technique for sampling applied is purposive sampling. Primary data was collected using the Indonesian version of WHOQOL-BREF instrument which consisted of 26 questions to measure the quality of life of respondents in 4 domain aspects, namely physical, psychological, social, and environmental. In addition, data collection is also carried out through observation. Secondary data was obtained from the records of the Prolanis of the Kaliwungu Health Center in the form of patient demographic data describing the basic characteristics of the respondents such as age, gender, and education level. The data is used as supporting data in the research analysis process. The data analysis method in this study is univariate and bivariate analysis.

4. Results and Discussion

Findings

Respondent Characteristics

Table 1. Respondent Characteristics.

Characteristics	Intervention Groups n=18		Control Group n=18	
	f	%	f	%
Gender				
Women	18	100	18	100
Age (years)				
51-60	12	66,7	10	55,6
61-75	6	33,3	8	44,4
Jobs				
Farmer	0	0	3	16,7
Labor	5	27,8	6	33,3
IRT	12	66,7	7	38,9
Self-employed	1	5,6	2	11,1
Education				
Not in school	4	22,2	4	22,2

SD	12	66,7	4	22,2
Junior High School	0	0	5	27,8
High School	2	11,1	5	27,8
Marital Status				
Married	11	61,1	8	44,4
Widow/Doubter	7	38,9	10	55,6
DM History				
There is a DM history	18	100	18	100

Based on Table 1, all respondents in the intervention group and the control group were female as many as 18 respondents (100%). The majority of respondents were in the age range of 51-60 years, namely in the intervention group as many as 12 respondents (66.7%) and in the control group as many as 10 respondents (55.6%). Based on the work, most of the respondents in the intervention group were housewives as many as 12 respondents (66.7%), while in the control group were also dominated by housewives as many as 7 respondents (38.9%). Based on education level, most of the respondents in the intervention group were 12 people (66.7%). In the control group, the highest level of education was junior high and high school, each with 5 people (27.8%). Based on marital status, the majority of respondents in the intervention group were married as many as 11 respondents (61.1%), while in the control group, most of the respondents were widowed/widowed (55.6%). All respondents in both groups had a history of diabetes mellitus as many as 18 respondents (100%), so the characteristics of the respondents were relatively homogeneous.

Quality of Life of Diabetes Mellitus Patients

Table 2. Quality of Life of Diabetes Mellitus Patients.

Groups	Categories	Median	SD	Min	Max
Intervention	Pre-test	43.00	9.974	33	80
	Post-test	78.13	6.954	66	91
Controls	Pre-test	39.00	11.660	31	64
	Post-test	40.13	11.974	31	64

Based on Table 2, the quality of life of patients with diabetes mellitus in the intervention group before being given Benson relaxation therapy had a median of 43.00 and after the intervention increased to 78.13. This increase was accompanied by a decrease in the standard deviation value, which showed that respondents' quality of life became better and more homogeneous after the intervention. In the control group, the median quality of life before treatment was 39 and after observation was 40.13 with a relatively unchanged range of values and standard deviations.

Normality Test

Table 3. Normality Test.

Groups	Categories	Shapiro-Wilk Statistic	df	Sig.
Intervention	Pre-test	.663	18	.000
	Post-test	.957	18	.541
Controls	Pre-test	.858	18	.011
	Post-test	.858	18	.011

Based on the results of the *Shapiro-Wilk Normality Test* in Table 3, a significance value was obtained in the intervention group's pre-test data of 0.000 ($p < 0.05$) and in the control group's pre-test of 0.011 ($p < 0.05$), which indicates that the data is not normally distributed. Meanwhile, in the post-test of the intervention group, a significance value of 0.541 ($p > 0.05$) was obtained, which indicates normal distributed data. However, because not all data meet the assumption of normality, the next analysis in this study uses non-parametric statistical tests, namely the *Wilcoxon Test* and the *Mann-Whitney Test*.

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Table 4. Wilcoxon Test.

Kelompok	Keterangan	N	Mean Rank	Sum of Ranks	P-value
Kelompok intervensi	Negative Ranks	0 ^a	.00	.00	0.00
	Positive Ranks	17 ^b	9.00	153.00	
	Ties	1 ^c			
	Total	18			
Kelompok kontrol	Negative Ranks	0 ^d	.00	.00	0.068
	Positive Ranks	4 ^e	2.50	10.00	
	Ties	14 ^f			
	Total	18			

Based on the results of the *Wilcoxon* Test in Table 4, a *p-value* of 0.00 ($p < 0.05$) was obtained in the intervention group, which showed a significant difference between the quality of life of patients with diabetes mellitus before and after being given Benson relaxation therapy and the Qur'an murottal Surat Ar-Rahman. These results are supported by the findings of positive ranks in most respondents, which indicate an improvement in quality of life after the intervention is given. On the other hand, in the control group, a *p-value* of 0.068 ($p > 0.05$) was obtained, indicating that there was no significant difference between the results of the pre-test and post-test quality of life of patients with diabetes mellitus.

Differences in the Results of Benson and Murottal Al-Qur'an Relaxation Therapy Surah Ar-Rahman on the Quality of Life of Diabetes Mellitus Patients

Table 5. Mann *Whitney* Test.

Kelompok	N	Mean Rank	Sum of Ranks	P-value
Intervensi	18	27.50	495.00	0.00
Kontrol	18	9.50	171.00	0.00

Based on the results of the *Mann-Whitney* Test in Table 5, a *p-value* of 0.00 ($p < 0.05$) was obtained, indicating a significant difference in quality of life between the intervention group and the control group. The mean rank value of the intervention group was higher compared to the control group, which indicates that the quality of life of patients with diabetes mellitus who received Benson relaxation therapy and the Qur'an murottal Surat Ar-Rahman was better than that of patients who did not receive the intervention.

Discussion

Univariate Analysis

a. Characteristics of Respondents of Diabetes Mellitus Patients

The results of the univariate analysis found that all respondents in this study were female (100%). Epidemiologically, women in pre-elderly to elderly age have a tendency to increase the risk of type 2 Diabetes Mellitus related to hormonal changes, decreased insulin sensitivity, and lifestyle factors. Most of the respondents were in the age range of 51–60 years, namely 66.7% in the intervention group and 55.6% in the control group. This age range is a high-risk category for the occurrence of complications of Diabetes Mellitus, both physical and psychological, which can ultimately affect the quality of life. From the education aspect, the majority of respondents have a basic education level (SD). Relatively low education can affect the ability to understand chronic disease management, such as dietary regulation, physical activity, and adherence to Diabetes Mellitus therapy. In addition, most of the respondents are housewives, who have the potential to experience

limited access to health information and are more dependent on family support in managing their illnesses. Overall, these characteristics describe populations with socio-demographic risk factors that may contribute to the quality of life of Diabetes Mellitus patients.

b. Overview of Quality of Life of Patients with Diabetes Mellitus Before Intervention

Before the intervention was carried out, the median quality of life score in the intervention group was 43.00 and in the control group was 39.00. The value is in the low to medium category, which indicates that most of the Diabetes Mellitus patients in this study have not achieved optimal quality of life. This condition is in accordance with the concept that Diabetes Mellitus as a long-term chronic disease can affect various aspects of life, covering physical domains such as fatigue, sleep disorders, and neuropathic pain; psychological domains such as stress as well as anxiety about possible complications; social domains in the form of dependency and activity restrictions; and environmental domains related to access to health services.

The fairly wide range of scores accompanied by relatively large standard deviations showed that there was a variation in the perception of quality of life between respondents, which was likely influenced by the length of time they had Diabetes Mellitus, glucose control levels, and different social supports. Descriptively, this data shows that Diabetes Mellitus patients in the Kaliwungu Health Center area still face significant physical and psychological burdens due to the disease they suffer.

c. Overview of Quality of Life of Diabetes Mellitus Patients After Intervention

After the administration of Benson's relaxation therapy combined with the Qur'anic murottal Surah Ar-Rahman for seven days, the median quality of life score in the intervention group increased to 78.13. This increase descriptively shows an improvement in the perception of physical and psychological well-being of Diabetes Mellitus patients. The decrease in the standard deviation value also indicates that the increase occurred relatively evenly among respondents. Physiologically, Benson's relaxation technique contributes to suppressing the activation of the sympathetic nervous system and lowering stress hormones such as cortisol, thereby helping to maintain the stability of glucose metabolism.

On the other hand, the Qur'anic murottal provides a spiritual and emotional calming effect that can reduce anxiety and increase acceptance of chronic disease conditions. The synergy of the two interventions has the potential to improve psychological and physical aspects that were previously disturbed due to Diabetes Mellitus. In contrast, in the median control group the score experienced only a very minimal increase to 40.13, which descriptively suggests that without specific interventions, the quality of life of Diabetes Mellitus patients is less likely to experience significant changes in a short period of time.

Bivariate Analysis

The Effect of Benson and Murottal Al-Qur'an Relaxation Therapy of Surah Ar-Rahman on Quality of Life in Patients with Diabetes Mellitus

The results of this study show that the administration of Benson relaxation therapy combined with the murottal of the Qur'an Surat Ar-Rahman caused significant changes in the quality of life of Diabetes Mellitus patients. This effect can be seen from the comparison of

scores before and after treatment in the intervention group, and no significant changes were found in the control group.

In the intervention group, before the therapy was implemented, the median quality of life score was recorded at 43.00 with a range of 33–80 and a standard deviation of 9.974. This data shows that the initial condition of the patient's quality of life is in the moderate category with a fairly diverse variation in scores between respondents.

After the therapy was administered for seven days, the median score increased to 78.13 with a range of 66–91, while the standard deviation decreased to 6.954. The increase of 35.13 points reflects a substantial improvement in the quality of life of patients. In addition to the increase in median values, the shift in the score range in a higher direction indicates that improvement is experienced by all members of the group. The decrease in standard deviation also indicates that the results after the intervention are more homogeneous, so it can be interpreted that the therapeutic effect is felt evenly.

The Wilcoxon test yielded a value of $p = 0.000$ ($p < 0.05$), with 17 of the 18 respondents experiencing an increase in scores and none experiencing a decrease. These findings show that therapy has a consistent positive impact on patients' quality of life.

In contrast, in the control group, the median score before observation was 39.00 with a range of 31–64 and a standard deviation of 11.660. After the observation period, the median only increased to 40.13 with a range that remained the same and a standard deviation of 11.974. The increase of 1.13 points was very small, and the results of the Wilcoxon test showed $p = 1.000$ ($p > 0.05$), so the change was declared insignificant.

This indicates that without specific interventions, patients' quality of life is unlikely to experience significant improvements. Thus, the difference in change patterns between the intervention and control groups confirms that Benson's relaxation therapy and Qur'anic murottal contribute to improving the quality of life of Diabetes Mellitus patients.

Differences in the quality of life of the intervention group and the control group

To ensure that there was a difference in final results between the two groups, a Mann–Whitney test was carried out on post-test scores. The results of the analysis showed that the median post-test score in the intervention group was 78.13, while in the control group it was 40.13. This difference of 38 points illustrates a stark difference in quality of life after treatment. The difference was further reinforced by the mean rank value, where the intervention group obtained 27.50 and the control group 9.50, indicating that the overall score distribution in the intervention group was higher.

The Mann–Whitney test yielded a value of $p = 0.000$ ($p < 0.05$), so it can be concluded that there was a significant difference between the two groups after treatment. With an equal number of respondents in each group, these results confirm that patients who received therapy had a significantly better quality of life than patients who did not receive therapy. In general, this study proves that Benson relaxation therapy and the Qur'an murottal have a significant influence in improving the quality of life of Diabetes Mellitus patients, both from the changes in the group and from the comparison of the final results between groups.

These results show that nonpharmacological interventions through a combination of Benson relaxation techniques and Qur'an murottal can be used as one of the effective strategies to improve the quality of life of Diabetes Mellitus patients. Therefore, these findings provide an empirical basis that the interventions applied have a real contribution to the comprehensive improvement of patient conditions.

6. Conclusion

In the intervention group, it showed an improvement in the quality of life of patients with Diabetes Mellitus after being given relaxation therapy Benson and the murottal of the Qur'an Surat Ar-Rahman. The median score increased from 43.00 (SD ± 9.974 ; min–max 33–80) to 78.13 (SD ± 6.954 ; min–max 66–91), indicating an improvement in quality of life. The results of the *Wilcoxon test* showed a value of $p = 0.000$ ($p < 0.05$), which means that there was a significant difference between before and after the intervention.

The control group had no meaningful change in quality of life during observation without intervention. The median score before observation was 39.00 (SD ± 11.660 ; min–max 31–64) and after observation 40.13 (SD ± 11.974 ; min–max 31–64). The results of the *Wilcoxon test* showed a value of $p = 0.068$ ($p > 0.05$), so there was no significant difference between the pre-test and post-test in the control group.

The *Mann–Whitney test* showed a significant difference between the intervention and control groups with a value of $p = 0.000$ ($p < 0.05$), indicating the effect of therapy on the patient's quality of life. The results of statistical analysis showed that Benson's relaxation therapy and the murottal Al-Qur'an Surat Ar-Rahman had a significant effect on improving the quality of life of Diabetes Mellitus patients in the Kaliwungu Kudus Health Center area.

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