

**LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW
KARYA ILMIAH : JURNAL ILMIAH**

Judul Jurnal Ilmiah (Artikel) : Quran recitation therapy reduces the depression levels of hemodialysis patients
 Jumlah Penulis : 2 orang
 Status Pengusul : Penulis pertama/penulis ke-2/penulis korespondensi **
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Original Research Article

Quran recitation therapy reduces the depression levels of hemodialysis patients

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ABSTRACT

Background: Depression is one of the serious neuropsychiatric complications in CKD patients because of its high prevalence, leading to decline in the quality of life, and the potential to increase the risk of death. The psycho spiritual therapy that potential to be developed for provide support and decrease depression level is Quran recitation therapy. But studies on the effectiveness of Quran recitation therapy are still limited. The aim of this study was to reveal the effect of Quran recitation therapy on depression level of CKD patients undergoing hemodialysis in Hemodialysis Unit of dr. Soepraoen Hospital, Malang, Indonesia.

Methods: This study was a quasy-experimental that compared the decrease of depression score level between treatment (n=14) and control group (n=14) before and after Quran recitation therapy. The subjects were CKD patients with hemodialysis who had moderate and severe depression based on screening results using BDI (Beck's Depression Inventory). Treatment group got Quran recitation therapy twice with one week interval. Data was analyzed using independent t-test.

Results: The depression score in the treatment group showed a significantly higher reduction than the control group. Decrease level of depression in the treatment group was 17.43 ± 9.00 , while in the control group 7 ± 7.19 ($p=0.002$, $p<0.05$).

Conclusions: This results show that Quran recitation therapy is an effective non-pharmacological therapy to overcome depression in CKD patients undergoing hemodialysis. This study adds the evidence based practice of Quran recitation therapy as Islamic psychotherapy in the clinical setting.

Keywords: Depression, Hemodialysis patient, Quran recitation therapy

INTRODUCTION

Chronic Kidney Disease (CKD) is a silent disease that is often diagnosed in the late stage at end stage renal disease (ESRD), where renal replacement therapy (dialysis and renal transplant) is the only treatment option. Early dialysis causes life changes in CKD patients both in physical and social aspects.¹ Patients with CKD experience a greater burden of symptoms and decreased quality of life than the general population.² Individuals diagnosed with CKD will tend to have neuropsychiatric

complications. Depression is one of the serious neuropsychiatric complications in CKD patients because of its high prevalence, leading to a decline in the quality of life, and the potential to increase the risk of death.¹

WHO states that depression will be the most common chronic disease and cause the second largest burden of medical cost that will affect people with non-physical diseases globally over the next decade.³ The meta-analysis study showed that the global prevalence of depression in ESRD patients reached 22.8% based on

interview and reached 39.3% based on depression scale.⁴ In hemodialysis unit of dr. Soepraoen Malang Hospital, there are 125 CKD patients with routine hemodialysis. Preliminary study showed 68 patients (54.4%) experienced depression with 27 patients on mild depression (21.6%), 24 patients on moderate depression (19.2%), and 17 patients on major depression (13.6%). It can be interpreted one of two CKD patients who undergo hemodialysis will risk on depression. The potential increase of depression prevalence in CKD patients, encourage the need of patient centered intervention and evaluation of its effectivity.⁴

Stressors that cause depression in CKD patients undergoing hemodialysis include fear of disability and death, routine hospitalization, dependence on long-term therapy of renal replacement therapy, financial difficulties, changes in social and marital relationship, uncertainty of disease prognosis, fluid restriction and diet, as well as physical weakness.^{5,6} CKD depressed patients had an increased risk of death and hospitalization than non-depressed patients.¹ Depression is associated with decreased exercise capacity and daily physical activity in hemodialysis patients.⁷ Anxiety and depression further decrease the quality of life and increase the disability of CKD patients.⁵

Although the measurement of quality of life indicators in CKD patients is often based on mortality rates, adherence to value targets on serum metabolism laboratory test, and the adequacy of dialysis and anemia management, patients with CKD suggest that identification of lifestyle, the impact of illness on family, and psychosocial support include the key priorities of CKD management. Improving the quality of psychosocial aspects becomes an equally important priority in the management of patients with CKD in addition to reducing symptoms and complications due to disease impact. Unfortunately, caregivers including health workers are often unaware on the physical and emotional symptoms that occur in their patients, including symptoms of psychological distress.²

Health care provider in hemodialysis units often pay little attention to somatic symptoms of psychiatric disorders so that depression in CKD patients is often undiagnosed. Patients are also impeded in receiving psychological intervention because of ignorance in recognizing the symptoms and therapeutic needs of the psychological disorders experienced.⁵

Intervention that potential to be developed in providing psychological support to patients with chronic diseases including CKD is psychospiritual therapy. Spirituality is the central component of comprehensive palliative care. Spiritual factors play an important role in the adaptation and quality of life of patients with chronic disease.⁸ Nurses are responsible for providing holistic care including giving satisfaction to spiritual needs. Meeting the patient's spiritual needs is an essential intervention

and contributes to improving the biological, psychological, and spiritual well-being.⁹

One of the psycho spiritual therapy that potential to be developed for provide support and decrease depression level is Quran recitation therapy. Quran recitation therapy is the therapy of reciting verses or prayers from the Quran and hadith to the ill person. Quran recitation therapy is the recommended therapy in Islam as the first medicine when a Muslim sick.^{10,11} But studies on the effectiveness of Quran recitation therapy is still limited. The aim of this study was to reveal the effect of Quran recitation therapy on depression level of CKD patients with hemodialysis in Hemodialysis Unit of dr. Soepraoen Hospital, Malang, Indonesia

METHODS

This study was a quasy-experimental that compared the decrease of depression score level between treatment and control group before and after Quran recitation therapy. This study conducted at Hemodialysis Unit of Dr. Soepraoen Hospital, Malang, Indonesia on July-August 2019. The protocol of this study has been approved by Ethic Committee of Health Polytechnic of Health Ministry Malang. The subjects were CKD patients with hemodialysis who had moderate and severe depression based on screening results using BDI (Beck's Depression Inventory) instrument (moderate depression=20-28, severe depression= 29-63).

Inclusion criteria were Muslim and agreed to participate. Exclusion criteria was patients who in acute condition of CKD symptoms that was not possible to follow (such as severe dyspnea, chills, and other physical complaints) and patients who drop out from research intervention. Patients who meet the inclusion and exclusion criteria were divided randomly into two groups: treatment group (n=14) and control group (n=14).

Treatment group got Quran recitation therapy twice with one week interval. The therapy schedule adjusts to the patient's hemodialysis schedule. Patients were asked to perform wudoo first before Quran recitation therapy, the purpose and benefits of Quran recitation were explained, and the patients was asked to close his eyes while listening Quran recitation accompanied with dhikr. Quran recitation were conducted by therapist that expert in Quran therapy. The verses that were recitated including Al Fatihah, Al Baqarah: 1-5, Al Baqarah: 102, Al Baqarah: 163-164, Al Baqarah: 255, Kursi Verse, Al Baqarah: 285-286, Al Imron: 18-19, Al 'Araf: 54-56, Al Mukminin: 115-118, Ash Soffat: 1-10, Al Ahqaaf: 29-32, Al Hasyr: 21-24, Al Jin: 1-9, Al Ikhlas, Al Falaq, and An Naas. After the therapy patients were asked to convey what was felt or experienced during therapy. The total time of each therapy was 45 minutes. Four days after the last therapy, the depression score was evaluated using BDI (Beck's Depression Inventory) instrument.

Statistics were conducted by SPSS 17.0 software. All data were expressed as mean±standard deviation (SD). The significance of differences was determined by independent t-test. A value of p<0.05 was considered statistically significant.

RESULTS

Demographic and clinical data of participants

Demographic data of participants are shown in Table 1. In treatment group there were six male patients (43%) and eight female patients (57%). In control group there were four male patients (28.5%) and ten female patients (71.5%). The mean of age was 50.21±12.84 years in

treatment group and 48.92±18.44 years in control group. Educational level was evenly distributed in both groups, most were low educated (≤12th grade). Most were married in both groups, thirteen patients (93%) in treatment groups and nine patients (64.28%) in control group. Most were unemployed in both groups, thirteen patients each (93%). The mean of hemodialysis duration was 2.4±2.4 years in treatment group and 1.17±1.5 years in control group. The mean of CRP level as one of biomarker of depression was 18113±1044pg/mL in treatment group and 18438±692pg/mL in control group. This values were significantly higher compared with non-depression CKD patients (p<0.05). The mean of CRP level in non-depression CKD patients (n=20) was 17154.80±1455.07pg/mL.

Table 1: Demographic and clinical data of participants.

Variables	Treatment group (n=14)		Control group	
	Mean±SD	n	Mean±SD	n
Gender	Male	6 (43%)		4 (28.5%)
	Female	8 (57%)		10 (71.5%)
Age (years)	50.21±12.84		48.92±18.44	
Educational level	Elementary school	4 (28.5%)		6 (43%)
	Junior high school	5 (36%)		4 (28.5%)
	Senior high school	4 (28.5%)		4 (28.5%)
	High education	1 (7%)		-
Marital status	Single	-		3 (21.43%)
	Married	13 (93%)		9 (64.28%)
	Divorced	1 (7%)		2 (14.29%)
Job	Employed	1 (7%)		1 (7%)
	Unemployed	13 (93%)		13 (93%)
Hemodialysis duration (years)	2.4±2.4		1.17±1.5	
CRP Level (pg/mL)	18113±1044		18438±692	

Table 2: Quran recitation therapy effect on depression level.

Subject	Treatment group			Control group		
	Pre-test	Post-test	Δ	Pre-test	Post-test	Δ
1.	26	18	8	31	19	12
2.	25	31	-6	20	10	10
3.	20	7	13	31	27	4
4.	23	9	14	22	11	11
5.	29	2	27	27	19	8
6.	33	16	17	32	22	10
7.	30	11	19	30	25	5
8.	27	3	24	29	11	18
9.	28	2	26	21	19	2
10.	22	8	14	23	6	17
11.	31	9	22	22	27	-5
12.	24	0	24	39	28	11
13.	21	6	15	25	30	-5
14.	29	2	27	39	39	0
Mean±SD	27.13±3.95	8.86±8.30	17.43±9.00	27.93±6.21	20.92±9.20	7.00±7.19

Quran recitation therapy effect on depression level

The average of depression score at the pretest was 27.13 ± 3.95 in the treatment group and 27.93 ± 6.21 in the control group. While at post-test both groups showed a decrease in depression score by 8.86 ± 8.30 in the treatment group and 20.92 ± 9.20 in the control group ($p=0.001$, $p<0.05$). However, the depression score in the treatment group showed a significantly higher reduction than the control group. Decrease level of depression in the treatment group was 17.43 ± 9.00 , while in the control group 7 ± 7.19 ($p=0.002$, $p<0.05$) (Table 2 and Figure 1).

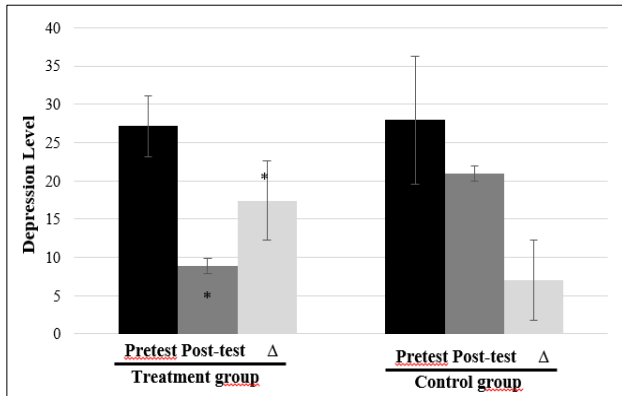


Figure 1: Quran recitation therapy effect on depression level.

DISCUSSION

The result of this study showed that Quran recitation therapy was effective in reducing the depression level in CKD patients with hemodialysis. This result was in line with other previous studies. Satrianegara et al, proved that independent Quran recitation therapy could reduce depression level and improve the spiritual quality of life in cancer patients undergoing radiotherapy.¹² Quran recitation therapy could reduce anxiety level in people with generalized anxiety disorder (GAD / Generalized Anxiety Disorders).¹³ Jaber et al, proved that reciting the Quran was able to reduce depression level in psychiatric patients. Quran recitation has been proved to decrease anxiety in CKD patients undergoing hemodialysis in Iran.^{14,15}

In Fauzan and Shahidan study proved that reading and listening to Quran increased the delta brainwaves.¹⁶ Delta waves were needed to stimulate growth hormone for the repair and growth of cells and tissues. Listening to Quran recitation further increased alpha waves compared to classical music thus further enhanced the relaxed effect and increased the attention span.¹⁷ Reciting the Quran further increased the alpha waves activity than reading the book so that Quran recitation could be used as a medium of meditation, reducing stress, and creating an effect of peace of mind.¹⁸ Listening Quran recitation further triggered alpha waves than listening to music, soft or hard rock music. The alpha waves was one of the

brainwaves detected by the EEG (electroencephalogram) and more predominantly come from the occipital lobe during conscious relaxation with the eyes closed. The alpha waves decreased when the eyes were open, decreased consciousness, and sleep. Increasing alpha waves while listening to the Quran indicated that the Quran recitation triggered a significant relaxation and calming effect. This was possible because the Quran had a specific effect on the human heart that triggered the release of hormones and chemicals that caused relaxation.¹⁹⁻²¹

Quran recitation therapy was one of sharia therapy that comes from Allah and His Messenger based on Quran and hadith so Quran recitation including worship. In Islam the law of using Quran recitation therapy to treat illness was mubah. Even the sharia recommended it and no doubt that treatment with the Quran and hadith was a perfect treatment and beneficial for both psychological and physical illness.^{10,11}

The suggestion of treatment with Quran recitation therapy had been noted in the Quran in Surah Fushilat: 44, Al-Isra': 82, and Yunus: 57. "Say, it is, for those who believe, a guidance and cure." (QS Fushilat: 44). "And authors send down of the Qur'an that which is healing and mercy for the believers, but it does not increase the wrongdoers except in loss." (QS Al-Isra': 82). "O mankind, there has to come to you instruction from your Lord and healing for what is in the breasts and guidance and mercy for the believers." (QS Yunus: 57).

Quran recitation included Islamic psychotherapy methods that could cause behavioral changes in patients. There was an assumption that the Quran had energy that could provide psychotherapy effects on patients with mental disorders.²² Psychoreligious therapy played an important role as a positive psychological factor. There was a positive relationship between immunity and spirituality. The level of individual spirituality or faith could increase the body immunity to the disease and accelerated the healing along with the medical therapy provided.²³

A false understanding in Indonesian society that Quran recitation therapy was devoted to the treatment of diseases caused by magic or possession of the jinn, and had no effect on the healing of physical or psychological diseases. Though Quran recitation therapy was a treatment that could be done in line with medical treatment. Even Quran recitation therapy was the faith medicine that was prescribed as the first medicine when a Muslim sick.^{24,25}

Based on the WHO holistic health paradigm (1984), health had four dimensions that were equally important to a person life. These four dimensions included physical, psychological, social, and religious dimension. Therefore, therapeutic assistance given to a ill person should include these four dimensions.²³ Quran recitation therapy would increase individual religious commitment which was very

important in preventing someone to get ill, improved the ability to survive, and accelerated the healing of illness.²⁶

Reciting the verses of Quran was a form of dhikr (remembrance of Allah). With dhikr the heart would be calm, so avoid from anxiety. Allah Almighty says "Those who have believed and whose hearts are assured by the remembrance of Allah. Unquestionably, by the remembrance of Allah hearts are assured." (QS.Ar Ra'd: 28). Quran recitation also had aspect of prayer. Prayer in the life of a Muslim occupied a strategic psychological position so could give the soul power to the reader. Prayer contained a spiritual power that could inspire confidence and optimism, both of which were fundamental on healing of an illness.²²

But did not all patients could directly benefit from Quran recitation therapy. Quran recitation therapy would prove beneficial if it fulfilled two conditions, one from the patients and the other from the therapist. Conditions related to the patient were the strength of the soul, the sincerity of the soul in dependent on the God, the belief in the Quran as a medicine and mercy for the Muslim, the right *ta'awwudz* utterance, and the ability to combine between heart and verbal.

A Muslim who was able to optimally treat his illness with Quran faithfully, with perfect acceptance, and belief, would never be defeated by illness.²⁴ In this study there was one respondent who was given Quran recitation therapy but declared no benefit and did not undergo any changes after Quran recitation. This was possible because of poor patient acceptance and self-confidence in the Quran recitation therapy provided. In addition, there may be other stressor factors that were associated with the disease or not that caused the patient's depression level did not decrease.

CONCLUSION

In conclusion, this results show that Quran recitation therapy is an effective non-pharmacological therapy to overcome depression in CKD patients undergoing hemodialysis. Quran recitation therapy is not contradictory and can be done in line with medical treatment that patients undergo.

This study adds the evidence based practice of Quran recitation as Islamic psychotherapy in the clinical setting. Screening and caring for patients with psychological disorders including depression in CKD patients with hemodialysis was a challenge for the health care team in the hemodialysis unit, given the hectic activity of the hemodialysis unit. Moreover, to provide interventions including the application of Quran recitation psychotherapy. A system needs to be established to integrate the application of psychotherapy, especially Quran recitation, into the hemodialysis unit clinic service so as not interfere and not increase the workload of health personnel in the hemodialysis unit.

Because CKD requires long life therapy of hemodialysis, CKD patients are required to be able to adapt and have a good acceptance of the disease to avoid neuropsychiatric complications that will exacerbate the physical illness suffered. Therefore, Quran recitation therapy should be carried out in a sustainable manner, can be done independently by patients in their daily life to maintain positive confidence in illness.

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Quran recitation therapy reduces the depression levels of hemodialysis patients

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ABSTRACT

Background: Depression is one of the serious neuropsychiatric complications in CKD patients because of its high prevalence, leading to decline in the quality of life, and the potential to increase the risk of death. The psycho-spiritual therapy that potential to be developed for provide support and decrease depression level is Quran recitation therapy. But studies on the effectiveness of Quran recitation therapy are still limited. The aim of this study was to reveal the effect of Quran recitation therapy on depression level of CKD patients undergoing hemodialysis in Hemodialysis Unit of dr. Soeproen Hospital, Malang, Indonesia.

Methods: This study was a quasi-experimental that compared the decrease of depression score level between treatment (n=14) and control group (n=14) before and after Quran recitation therapy. The subjects were CKD patients with hemodialysis who had moderate and severe depression based on screening results using BDI (Beck's Depression Inventory). Treatment group got Quran recitation therapy twice with one week interval. Data was analyzed using independent t-test.

Results: The depression score in the treatment group showed a significantly higher reduction than the control group. Decrease level of depression in the treatment group was 17.43±9.00, while in the control group 7±7.19 (p=0.002, p<0.05).

Conclusions: This results show that Quran recitation therapy is an effective non-pharmacological therapy to overcome depression in CKD patients undergoing hemodialysis. This study adds the evidence based practice of Quran recitation therapy as Islamic psychotherapy in the clinical setting.

Keywords: Depression, Hemodialysis patient, Quran recitation therapy

INTRODUCTION

Chronic Kidney Disease (CKD) is a silent disease that is often diagnosed in the late stage at end stage renal disease (ESRD), where renal replacement therapy (dialysis and renal transplant) is the only treatment option. Early dialysis causes life changes in CKD patients both in physical and social aspects.¹ Patients with CKD experience a greater burden of symptoms and decreased quality of life than the general population.² Individuals diagnosed with CKD will tend to have neuropsychiatric

complications. Depression is one of the serious neuropsychiatric complications in CKD patients because of its high prevalence, leading to a decline in the quality of life, and the potential to increase the risk of death.³

WHO states that depression will be the most common chronic disease and cause the second largest burden of medical cost that will affect people with non-physical diseases globally over the next decade.⁴ The meta-analysis study showed that the global prevalence of depression in ESRD patients reached 22.8% based on

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INTRODUCTION

Chronic Kidney Disease (CKD) is a silent disease that is often diagnosed in the late stage at end stage renal disease (ESRD), where renal replacement therapy (dialysis and renal transplant) is the only treatment option. Early dialysis causes life changes in CKD patients both in physical and social aspects.¹ Patients with CKD experience a greater burden of symptoms and decreased quality of life than the general population.² Individuals diagnosed with CKD will tend to have neuropsychiatric

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interview and reached 39.3% based on depression scale.⁴ In hemodialysis unit of dr. Soepraoen Malang Hospital, there are 125 CKD patients with routine hemodialysis. Preliminary study showed 68 patients (54.4%) experienced depression with 27 patients on mild depression (21.6%), 24 patients on moderate depression (19.2%), and 17 patients on major depression (13.6%). It can be interpreted one of two CKD patients who undergo hemodialysis will risk on depression. The potential increase of depression prevalence in CKD patients, encourage the need of patient centered intervention and evaluation of its effectivity.⁴

Stressors that cause depression in CKD patients undergoing hemodialysis include fear of disability and death, routine hospitalization, dependence on long-term therapy of renal replacement therapy, financial difficulties, changes in social and marital relationship, uncertainty of disease prognosis, fluid restriction and diet, as well as physical weakness.^{5,6} CKD depressed patients had an increased risk of death and hospitalization than non-depressed patients.¹ Depression is associated with decreased exercise capacity and daily physical activity in hemodialysis patients.⁷ Anxiety and depression further decrease the quality of life and increase the disability of CKD patients.⁵

Although the measurement of quality of life indicators in CKD patients is often based on mortality rates, adherence to value targets on serum metabolism laboratory test, and the adequacy of dialysis and anemia management, patients with CKD suggest that identification of lifestyle, the impact of illness on family, and psychosocial support include the key priorities of CKD management. Improving the quality of psychosocial aspects becomes an equally important priority in the management of patients with CKD in addition to reducing symptoms and complications due to disease impact. Unfortunately, caregivers including health workers are often unaware on the physical and emotional symptoms that occur in their patients, including symptoms of psychological distress.²

Health care provider in hemodialysis units often pay little attention to somatic symptoms of psychiatric disorders so that depression in CKD patients is often undiagnosed. Patients are also impeded in receiving psychological intervention because of ignorance in recognizing the symptoms and therapeutic needs of the psychological disorders experienced.⁵

Intervention that potential to be developed in providing psychological support to patients with chronic diseases including CKD is psychospiritual therapy. Spirituality is the central component of comprehensive palliative care. Spiritual factors play an important role in the adaptation and quality of life of patients with chronic disease.⁸ Nurses are responsible for providing holistic care including giving satisfaction to spiritual needs. Meeting the patient's spiritual needs is an essential intervention

and contributes to improving the biological, psychological, and spiritual well-being.⁹

One of the psycho spiritual therapy that potential to be developed for provide support and decrease depression level is Quran recitation therapy. Quran recitation therapy is the therapy of reciting verses or prayers from the Quran and hadith to the ill person. Quran recitation therapy is the recommended therapy in Islam as the first medicine when a Muslim sick.^{10,11} But studies on the effectiveness of Quran recitation therapy is still limited. The aim of this study was to reveal the effect of Quran recitation therapy on depression level of CKD patients with hemodialysis in Hemodialysis Unit of dr. Soepraoen Hospital, Malang, Indonesia

METHODS

This study was a quasy-experimental that compared the decrease of depression score level between treatment and control group before and after Quran recitation therapy. This study conducted at Hemodialysis Unit of Dr. Soepraoen Hospital, Malang, Indonesia on July-August 2019. The protocol of this study has been approved by Ethic Committee of Health Polytechnic of Health Ministry Malang. The subjects were CKD patients with hemodialysis who had moderate and severe depression based on screening results using BDI (Beck's Depression Inventory) instrument (moderate depression=20-28, severe depression= 29-63).

Inclusion criteria were Muslim and agreed to participate. Exclusion criteria was patients who in acute condition of CKD symptoms that was not possible to follow (such as severe dyspnea, chills, and other physical complaints) and patients who drop out from research intervention. Patients who meet the inclusion and exclusion criteria were divided randomly into two groups: treatment group (n=14) and control group (n=14).

Treatment group got Quran recitation therapy twice with one week interval. The therapy schedule adjusts to the patient's hemodialysis schedule. Patients were asked to perform wudoo first before Quran recitation therapy, the purpose and benefits of Quran recitation were explained, and the patients was asked to close his eyes while listening Quran recitation accompanied with dhikr. Quran recitation were conducted by therapist that expert in Quran therapy.⁶ The verses that were recited including Al Fatihah, Al Baqarah: 1-5, Al Baqarah: 102, Al Baqarah: 163-164, Al Baqarah: 255, Kursi Verse, Al Baqarah: 285-286, Al Imron: 18-19, Al 'Araf: 54-56, Al Mukminin: 115-118, Ash Soffat: 1-10, Al Ahqaaf: 29-32, Al Hasyr: 21-24, Al Jin: 1-9, Al Ikhlas, Al Falaq, and An Naas. After the therapy patients were asked to convey what was felt or experienced during therapy. The total time of each therapy was 45 minutes. Four days after the last therapy, the depression score was evaluated using BDI (Beck's Depression Inventory) instrument.

Statistics were conducted by SPSS 17.0 software. All data were expressed as mean±standard deviation (SD). The significance of difference was determined by independent t-test. A value of $p < 0.05$ was considered statistically significant.

RESULTS

Demographic and clinical data of participants

Demographic data of participants are shown in Table 1. In treatment group there were six male patients (43%) and eight female patients (57%). In control group there were four male patients (28.5%) and ten female patients (71.5%). The mean of age was 50.21±12.84 years in

treatment group and 48.92±18.44 years in control group. Educational level was evenly distributed in both groups, most were low educated ($\leq 12^{\text{th}}$ grade). Most were married in both groups, thirteen patients (93%) in treatment groups and nine patients (64.28%) in control group. Most were unemployed in both groups, thirteen patients each (93%). The mean of hemodialysis duration was 2.4±2.4 years in treatment group and 1.17±1.5 years in control group. The mean of CRP level as one of biomarker of depression was 18113±1044pg/mL in treatment group and 18438±692pg/mL in control group. This values were significantly higher compared with non-depression CKD patients ($p < 0.05$). The mean of CRP level in non-depression CKD patients (n=20) was 17154.80±1455.07pg/mL.

Table 1: Demographic and clinical data of participants.

Variables	Treatment group (n=14)		Control group	
	Mean±SD	n	Mean±SD	n
Gender	Male	6 (43%)		4 (28.5%)
	Female	8 (57%)		10 (71.5%)
Age (years)	50.21±12.84		48.92±18.44	
Educational level	Elementary school	4 (28.5%)		6 (43%)
	Junior high school	5 (36%)		4 (28.5%)
	Senior high school	4 (28.5%)		4 (28.5%)
	High education	1 (7%)		-
Marital status	Single	-		3 (21.43%)
	Married	13 (93%)		9 (64.28%)
	Divorced	1 (7%)		2 (14.29%)
Job	Employed	1 (7%)		1 (7%)
	Unemployed	13 (93%)		13 (93%)
Hemodialysis duration (years)	2.4±2.4		1.17±1.5	
CRP Level (pg/mL)	18113±1044		18438±692	

Table 2: Quran recitation therapy effect on depression level.

Subject	Treatment group			Control group		
	Pre-test	Post-test	Δ	Pre-test	Post-test	Δ
1.	26	18	8	31	19	12
2.	25	31	-6	20	10	10
3.	20	7	13	31	27	4
4.	23	9	14	22	11	11
5.	29	2	27	27	19	8
6.	33	16	17	32	22	10
7.	30	11	19	30	25	5
8.	27	3	24	29	11	18
9.	28	2	26	21	19	2
10.	22	8	14	23	6	17
11.	31	9	22	22	27	-5
12.	24	0	24	39	28	11
13.	21	6	15	25	30	-5
14.	29	2	27	39	39	0
Mean±SD	27.13±3.95	8.86±8.30	17.43±9.00	27.93±6.21	20.92±9.20	7.00±7.19

Quran recitation therapy effect on depression level

The average of depression score at the pretest was 27.13 ± 3.95 in the treatment group and 27.93 ± 6.21 in the control group. While at post-test both groups showed a decrease in depression score by 8.86 ± 8.30 in the treatment group and 20.92 ± 9.20 in the control group ($p=0.001$, $p<0.05$). However, the depression score in the treatment group showed a significantly higher reduction than the control group. Decrease level of depression in the treatment group was 17.43 ± 9.00 , while in the control group 7 ± 7.19 ($p=0.002$, $p<0.05$) (Table 2 and Figure 1).

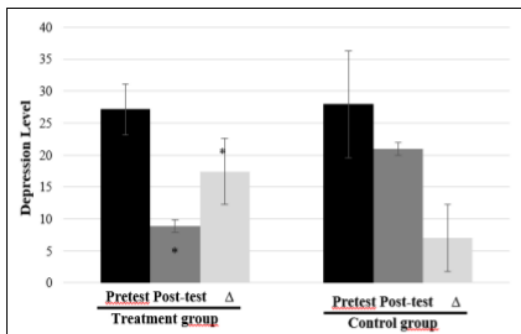


Figure 1: Quran recitation therapy effect on depression level.

DISCUSSION

The result of this study showed that Quran recitation therapy was effective in reducing the depression level in CKD patients with hemodialysis. This result was in line with other previous studies. Satrianegara et al, proved that independent Quran recitation therapy could reduce depression level and improve the spiritual quality of life in cancer patients undergoing radiotherapy.¹² Quran recitation therapy could reduce anxiety level in people with generalized anxiety disorder (GAD / Generalized Anxiety Disorders).¹³ Jaberi et al, proved that reciting the Quran was able to reduce depression level in psychiatric patients. Quran recitation has been proved to decrease anxiety in CKD patients undergoing hemodialysis in Iran.^{14,15}

In Fauzan and Shahidan study proved that reading and listening to Quran increased the delta brainwaves.¹⁶ Delta waves were needed to stimulate growth hormone for the repair and growth of cells and tissues. Listening to Quran recitation further increased alpha waves compared to classical music thus further enhanced the relaxed effect and increased the attention span.¹⁷ Reciting the Quran further increased the alpha waves activity than reading the book so that Quran recitation could be used as a medium of meditation, reducing stress, and creating an effect of peace of mind.¹⁸ Listening Quran recitation further triggered alpha waves than listening to music, soft or hard rock music. The alpha waves was one of the

brainwaves detected by the EEG (electroencephalogram) and more predominantly come from the occipital lobe during conscious relaxation with the eyes closed. The alpha waves decreased when the eyes were open, decreased consciousness, and sleep. Increasing alpha waves while listening to the Quran indicated that the Quran recitation triggered a significant relaxation and calming effect. This was possible because the Quran had a specific effect on the human heart that triggered the release of hormones and chemicals that caused relaxation.¹⁹⁻²¹

Quran recitation therapy was one of sharia therapy that comes from Allah and His Messenger based on Quran and hadith so Quran recitation including worship. In Islam the law of using Quran recitation therapy to treat illness was mubah. Even the sharia recommended it and no doubt that treatment with the Quran and hadith was a perfect treatment and beneficial for both psychological and physical illness.^{10,11}

The suggestion of treatment with Quran recitation therapy had been noted in the Quran in Surah Fushilat: 44, Al-Isra': 82, and Yunus: 57. "Say, it is, for those who believe, a guidance and cure." (QS Fushilat: 44). "And authors send down of the Qur'an that which is healing and mercy for the believers, but it does not increase the wrongdoers except in loss." (QS Al-Isra': 82). "O mankind, there has to come to you instruction from your Lord and healing for what is in the breasts and guidance and mercy for the believers." (QS Yunus: 57).

Quran recitation included Islamic psychotherapy methods that could cause behavioral changes in patients. There was an assumption that the Quran had energy that could provide psychotherapy effects on patients with mental disorders.²² Psychoreligious therapy played an important role as a positive psychological factor. There was a positive relationship between immunity and spirituality. The level of individual spirituality or faith could increase the body immunity to the disease and accelerated the healing along with the medical therapy provided.²³

A false understanding in Indonesian society that Quran recitation therapy was devoted to the treatment of diseases caused by magic or possession of the jinn, and had no effect on the healing of physical or psychological diseases. Though Quran recitation therapy was a treatment that could be done in line with medical treatment. Even Quran recitation therapy was the faith medicine that was prescribed as the first medicine when a Muslim sick.^{24,25}

Based on the WHO holistic health paradigm (1984), health had four dimensions that were equally important to a person life. These four dimensions included physical, psychological, social, and religious dimension. Therefore, therapeutic assistance given to a ill person should include these four dimensions.²³ Quran recitation therapy would increase individual religious commitment which was very

important in preventing someone to get ill, improved the ability to survive, and accelerated the healing of illness.²⁶

Reciting the verses of Quran was a form of dhikr (remembrance of Allah). With dhikr the heart would be calm, so avoid from anxiety. Allah Almighty says "Those who have believed and whose hearts are assured by the remembrance of Allah. Unquestionably, by the remembrance of Allah hearts are assured." (QS.Ar Ra'd: 28). Quran recitation also had aspect of prayer. Prayer in the life of a Muslim occupied a strategic psychological position so could give the soul power to the reader. Prayer contained a spiritual power that could inspire confidence and optimism, both of which were fundamental on healing of an illness.²²

But did not all patients could directly benefit from Quran recitation therapy. Quran recitation therapy would prove beneficial if it fulfilled two conditions, one from the patients and the other from the therapist. Conditions related to the patient were the strength of the soul, the sincerity of the soul in dependent on the God, the belief in the Quran as a medicine and mercy for the Muslim, the right *ta'awwudz* utterance, and the ability to combine between heart and verbal.

A Muslim who was able to optimally treat his illness with Quran faithfully, with perfect acceptance, and belief, would never be defeated by illness.²⁴ In this study there was one respondent who was given Quran recitation therapy but declared no benefit and did not undergo any changes after Quran recitation. This was possible because of poor patient acceptance and self-confidence in the Quran recitation therapy provided. In addition, there may be other stressor factors that were associated with the disease or not that caused the patient's depression level did not decrease.

CONCLUSION

In conclusion, this results show that Quran recitation therapy is an effective non-pharmacological therapy to overcome depression in CKD patients undergoing hemodialysis. Quran recitation therapy is not contradictory and can be done in line with medical treatment that patients undergo.

This study adds the evidence based practice of Quran recitation as Islamic psychotherapy in the clinical setting. Screening and caring for patients with psychological disorders including depression in CKD patients with hemodialysis was a challenge for the health care team in the hemodialysis unit, given the hectic activity of the hemodialysis unit. Moreover, to provide interventions including the application of Quran recitation psychotherapy. A system needs to be established to integrate the application of psychotherapy, especially Quran recitation, into the hemodialysis unit clinic service so as not interfere and not increase the workload of health personnel in the hemodialysis unit.

Because CKD requires long life therapy of hemodialysis, CKD patients are required to be able to adapt and have a good acceptance of the disease to avoid neuropsychiatric complications that will exacerbate the physical illness suffered. Therefore, Quran recitation therapy should be carried out in a sustainable manner, can be done independently by patients in their daily life to maintain positive confidence in illness.

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