ORIGINAL ARTICLE

The Efficacy of Dhikr Therapy on Anxiety in the Elderly People With Decreased Cognitive Function

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ABSTRACT

Introduction: Long-term anxiety that frequently encountered in the elderly has a detrimental effect on the elderly's emotional, physical health and cognitive function. Dhikr therapy is a belief based intervention that has a calming impact. This study aimed to examining the efficacy of dhikr treatment in reducing anxiety levels in older individuals with impaired cognitive function. **Methods:** TThis study used a quantitative method of Quasi Experiment design with a total of 38 respondents divided into two groups of intervention and control, each with 19 participants. The inclusion criteria in this study included elderly, able to communicate, mild-to-severe anxiety, mild-to-moderate cognitive decline, and Muslim. Anxiety was measured using the GAI, cognitive function was measured using SPMSQ. The intervention group was given an explanation treatment regarding the mechanism of dhikr, relaxation before dhikr, and filling out the activity book. Statistical analysis using Chi-square calculation, paired t-test, and ANCOVA. **Results:** The results showed a significant reduction in stress levels in the intervention group following Dhikr therapy (pvalue 0.000). After intervention, the number of elderly experiencing mild anxiety increased by 57.9 percent (n=11), whereas in the control group, 78.9 percent (n=15) experienced moderate anxiety. According to ANCOVA analysis, there is a significant difference in anxiety scores before and after dhikr therapy, demonstrating that dhikr therapy has an effect on anxiety in the elderly (p-value 0.000). **Conclusion:** The intervention of delivering dhikr treatment relieves anxiety in the elderly with impaired cognitive function. According to the findings, nurses can deliver dhikr therapy as one of the nursing activities to prevent anxiety in the elderly.

Keywords: Anxiety, Cognitive Function, Dhikr Therapy, Elderly

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INTRODUCTION

The elderly population in Indonesia continues to grow and it is estimated that there will be 33.69 million in 2025, 40.95 million in 2030, and 48.19 million in 2035 (1). The increased number of elderly people every year indicates that Indonesia's pyramid will undergo a change in shape during the next few years. This phenomenon is a reflection of the increasing life expectancy of the Indonesian population (2). Hypertension, hearing and vision impairments, dementia, and osteoporosis are all common in the elderly (3). Numerous health problems affect the elderly in Indonesia, one of which is cognitive impairment, which is a significant predictor of dementia, that represents a health and social problem (4).

Mild Cognitive Impairment (MCI) is a term that refers to a stage of cognitive deterioration that occurs between normal aging and dementia. Although there is no reliable data on prevalence in Indonesia, numerous studies have been conducted to gain a better understanding of the loss in cognitive function reported by the aged in the country. Previous study discovered that 62% of the elderly in the Bogor area had an impairment in cognitive function (5). Another study conducted a study on 306 elderly people with impaired cognitive function in Jakarta and Sumedang (6). Another study on 286 older persons in Jakarta with impaired cognitive function (7). According to data from the South Tangerang City Health Office, 222,093 senior adults aged 60 had a deterioration in cognitive function, accounting for approximately 31.37 percent of the 707,954 elderly

(8). This shows that cognitive impairment is particularly common among the elderly in Indonesia and has turned into a problem that requires attention.

Behaviour issues and psychiatric problems are frequently associated with MCI and have been reported to influence the presentation and extent of disease. Psychopathology symptoms such as depression, anxiety, and apathy frequently occur during the pre-dementia stage, dementia, and also during normal aging. Anxiety disorders frequently coexist with a declining physical condition (chronic pain) or other psychological diseases such as dementia or depression (9). Anxiety and cognition interact in a complicated way. According to multiple prior studies, anxiety disorders are twice as common in the elderly as they are in the young. This shows that anxiety is a significant issue for elderly today. In developing countries, the prevalence of anxiety in the elderly is significantly higher around 50% (10).

Non-pharmacological therapy can be used to overcome mild to moderate anxiety. This indicates that non-pharmacological treatment for anxiety has a considerable effect on emotional responses (4). Some non-pharmacological therapies such as behavioral techniques, cognitive approaches, and relaxation can be applied to reduce anxiety levels. Based on the religious characteristics of the Indonesian people, the researchers are important in performing therapy that combines a spiritual approach to creating calm with a reduction in anxiety. Other studies have also addressed several spiritual therapies that have been shown to be effective in treating psychological diseases such as depression, stress, and anxiety disorders, including through psychotherapy (11). The calming effect of dhikr therapy has been shown to reduce anxiety levels in the elderly. Dhikr therapy is a form of treatment that includes repetitive activities of remembering, reciting the name, and grandeur of Allah SWT, accompanied by an awareness of Allah SWT, with the goal of treating pathological illnesses (12).

At a prior study, nine elderly people in a nursing home were divided into control and intervention groups and offered dhikr therapy. Four meetings are required to provide dhikr treatment. The first meeting module or session covers the meaning of remembrance, reading remembrance, putting remembrance into practice, and reaping the rewards of remembrance. The stages of implementation, as well as the reading of recollection that will be said in the practice of remembrance, are covered in the second, third, and fourth meeting modules or sessions. The study's findings show that dhikr therapy can help elderly people in nursing homes feel less anxious(12). This supports a prior study that demonstrated religious or spiritual interventions help benefit mental health, such as anxiety reduction.

Another study, which had nine senior people, revealed the percentage of people who made it through the entire training session. Because the risk of high blood pressure is higher in women than in males, respondents were chosen in the female sex. The training was place over the course of seven meetings. The treatment was dhikr, which was based on Asmaul Husna's reading. The findings revealed that there was a substantial difference in the level of mental calmness before and after training (13). The research was conducted in Semarang, with the research sample consisting of senior diabetics. There was only one group in the study, and dhikr therapy was implemented for 25 minutes, along with tasbih reading (Subhanallah). According to the results of interviews, the elderly stated that the number of dhikr activities performed has increased, and that the dhikr prayer was also performed in the morning before the activity. Dhikr therapy's technique for reducing blood sugar levels is linked to the amount of stress a person is under, thus if done consistently in the morning before activities, it can induce a relaxed response. The average value of blood sugar levels in the elderly with diabetes before doing dhikr therapy is 176.25 mg/dl, while the average blood sugar level in the elderly with diabetes after doing dhikr therapy is 163.55 mg/dl, according to the findings of the research, analysis, and debate. According to the study's findings, there was a substantial change in blood sugar levels before and after the intervention, indicating that blood sugar levels were much lower. Dhikr treatment has an effect on blood sugar levels in diabetic senior people in Semarang (14). Therefore, researcher were interested in examining the efficacy of dhikr treatment in reducing anxiety levels in older individuals with impaired cognitive function.

MATERIALS AND METHODS

Research Design and Samples
The aimed of this study is to examine the effective ness of dhikr therapy on anxiety using a quantitative research approach named the Quasy Experimental Two Group Pre-Posttest Design. The intervention was accomplished through the administration of dhikr treatment. Samples were taken from the elderly population. Inclusion criteria: 60-74 years old, able to communicate, mild-to-severe anxiety, mild-moderate cognitive decline, and Muslim. The sample count was determined using G-Power Software Version 3.1.9.7. Estimated sample size using F-test, ANCOVA: Fixed effects, main effects and interactions assuming two tails, effect size 0.5. Power level 0.8, the minimum estimated sample is 34 plus an attrition rate of 10-15 percent with a total of 4 respondents, so the total sample size is 38.

Instrument
The SPMSQ, which was established by Pfeiffer in 1975, was used in this study to assess cognitive function

status with reliability tests using Cronbach's alpha score on 20 elderly people with a result of 0.930. The SPMSQ consists of ten item-based questions designed to assess cognitive decline. Respondents may complete this questionnaire. According to Pfeiffer, the SPMSQ scores consist of the following: Eight to ten errors indicate severe cognitive impairment, while five to seven errors indicate mild cognitive impairment. Three to four errors indicate minor cognitive impairment, while one to two errors indicate normal cognitive functioning.

A method for assessing anxiety in the elderly population Researcher used the Geriatric Anxiety Inventory (GAI) (15). Considering twenty elements that correspond to feelings and occurrences from the previous week. Each question point is assigned a value of 0 (answer No = no symptoms) or 1 (answer Yes = no symptoms), with a maximum of 20 points assigned to each question point. Scores 1-5 indicate mild anxiety, 6-10 indicate moderate anxiety, 11-15 indicate severe anxiety, and 16-20 indicate panic. The intervention media used in this study is a daily dhikr activity book that offers information about dhikr, includes definition, benefits, types, processes, and reading, as well as tables for daily dhikr implementation.

Procedure

Both groups were administered pre- and post-tests. Following the pre-test, the intervention group received therapy for two weeks, with each session lasting between 30 to 45 minutes. Following the collection of post-test scores, the control group was provided with an explanation of dhikr treatment. The control group received dhikr therapy in the form of booklets explaining the meaning, benefits, types, procedure, and recitation of dhikr therapy. According to the research protocol, the intervention involved describing how dhikr therapy reduces anxiety, providing each participant with a daily dhikr activity book, and instructing both groups on how to perform dhikr therapy, beginning with breathing exercises and then dhikr recitation.

Data Analysis

The analysis was carried out in stages, beginning with univariate and bivariate analysis using the SPSS 22.0 program. The chi square and independent T-test were utilized for univariate (descriptive analysis) and bivariate analysis, respectively. Paired Sample T-test and ANCOVA were used to analyze the association, the significance of the effect of dhikr treatment on anxiety, and the different tests. Prior to performing the test, a bivariate statistical data normality test is performed using Shapiro Wilk (n<50). The data analysis results were normally distributed with a p>0.05 significance level.

Ethical Clearance

This study was approved by Research Ethics Committee of Sekolah Tinggi Ilmu Keperawatan PPNI Jabar with the no: III/167.1/KE/STIKEP/PPNI/IV/2021.

RESULTS

The study lasted for two weeks in June 2021. The sample includes 38 respondents, who were separated into two groups: the intervention group, which consisted of 19 respondents, and the control group, which consisted of 19 respondents. According to the respondents' characteristics, the average age was 64.76 years (SD = 3.69). 63.2 percent of respondents are female. Respondents' most recent education is SD 73.7 percent, their marital status is 81.6 percent, and they are all 100 percent muslim. 86.8 percent of respondents reported experiencing moderate cognitive impairment. The frequency analysis showed no significant difference in age, gender, education, marital status, religion, or cognitive function status between the intervention and control groups.

According to table 4.4 of the frequency and description of anxiety levels, the mean age score for those experiencing moderate anxiety was 64.77 (SD = 3.76). The majority of female respondents (59.3 percent) reported experiencing moderate anxiety; up to 74.1 percent of respondents with a last elementary school education reported experiencing moderate anxiety; 77.8 percent of respondents were married; and 65.8 percent of elderly respondents with mild cognitive decline reported experiencing mild anxiety. Bivariate study using ANCOVA revealed no significant difference in the level of anxiety in elderly with impaired cognitive function based on features with a p-value > 0.05.

According to Table 4.2, the most common level of anxiety before the dhikr therapy was at 27 elderly (71.1 percent), but after the intervention, the anxiety level decreased to 23 elderly (60.5 percent), and moderate anxiety increased to 14 elderly (36.8 percent)

As shown in Table 4.5, anxiety scores were taken prior to and following the dhikr therapy intervention in the intervention group. With a p-value of 0.000, there is a significant difference. While there was no significant difference between the control and experimental groups, with a p-value of 0.056, there was no difference between the control and experimental groups. Additionally, the difference between pre- and post-test results for the intervention and control groups can be noticed in the per-domain scores. The findings indicate that dhikr

Table I : Comparison of respondents' demographic features in the intervention and control groups (n = 38)

Characteristics	Total	Intervention group	Control group	p-value
	(N = 38) %	N = 19 (%)	N = 19 (%)	
Age (Mean ± SD)	64.76 ±0.59	65.61± 0.89	64.15 ± 0.81	0.351
Gender				0.737
Male	14(36.8)	8(42.1)	6(31.6)	
Female	24(63.2)	11(57.9)	13(68.4)	
Education				0.534
Elementary school	28 (73.7)	13 (68.4)	15(78.9)	
Junior high school	9(23.7)	5(26.3)	4(21.1)	
High school	1(2.6)	1(5.3)	0	
Marital status				0.570
Married	31 (81.6)	14 (73.7)	16(84.2)	
Widow or Other	7 (18.4)	5 (26.3)	3 (15.8)	
Religion				
Islam	38 (100)	19 (100)	19 (100)	
Other	0	0	0	
Status of Cognitive Function				0631
Light	33 (86.8)	16 (84.2)	17 (78.9)	
Average	5 (13.2)	3(15.8)	2(21.1)	

Table II : Anxiety features based on characteristics of elderly with cognitive deterioration (n = 38)

Characteristics of	Mild	Anxiety Moderate	Anxiety Severe anxiety	p-value
Age (Mean ± SD)	65.09 ± 3.67	64.77 ± 3.76	64.00 ± 4.35	0.246
Gender				
Male	3 (42.9)	11 (40.7)	0	0.270
Female	4 (57.1)	16 (59.3)	4 (10.5)	
Education				
Elementary school	6 (21.4)	20 (74.1)	2 (50.0)	0.680
Junior high school	1 (11.1)	6 (22.2)	2 (50.0)	
Senior high school	0	1 (3.7)	0	
Marital status				
Married	5 (71.4)	21 (77.8)	3 (75.0)	0.938
Widow or Others	2 (28.6)	6 (22.2)	1 (25.0)	
Religion				
Islam	7 (18.4)	27 (71.1)	4 (10.5)	
Non-Muslim	0	0	0	
Status Function Cognitive				0.689
Mild	6 (15.8)	25 (65.8)	4 (10.5)	
Moderate	1 (2.6)	2 (5.3)	0	

Table III : The level of anxiety following dhikr treatment pre- and post-intervention

Group	Mild Anxiety	Moderate Anxiety	Severe Anxiety	*P-value* of
Pre test	7 (18.4%)	27 (71.1%)	4 (10.5%)	0079
Post test	14 (36.8%)	23 (60.5%)	1 (2.6%)	0021

Table IV : Pretest and posttest results Anxiety in the control and intervention groups (n=38)

Variables	Pre-test	Post-test	*t*	Mean difference	*p-value*
Total score (Mean±SD)					
Intervention Group	8.57±2.63	5.36±1.86	-9.740	-3.210	0.000
Control Group	8.00±1.66	8.26±1.66	2.041	0.263	0.056

Table V : Domain-specific pretest-posttest at intervention and control groups (n=38)

Domain	Pre-test (Mean ± SD)	Post-test (Mean ± SD)	*t*	*Mean difference*	*p-value*
Fear					
Intervention group	1.21 ± 0.71	0.63 ± 0.76	- 3012	-0578	0007
Control group	1:31 ± 0:47	1:31 0:47±	0.000	0.000	1.000
Worried					
Intervention group	± 1.730.65	0.73 ±0:56	-6538	-1000	0000
Control group	0.68 1.84 ±	2:05 ±0.62	2.191	0.210	0.083
Concerns					
Intervention group	±1:150:50	±0:52 0:51	- 4609	-0631	0000
Control group	1:10 ± 0:45	1:10 0:45±	0.000	0.000	1.000
Awareness Concerns					
Intervention group	0.78 ± 0.78	± 0.69 0:57	-1714	-0210	0104
Control group	0.63 ±0:49	0.63 ± 0:49	0.000	0.000	1.000
Physical Symptoms					
Intervention group	1:52 ± 1:12	1:571:07±	1.000	0.052	0331
Control group	1:47 ± 1:16	1:161.63±	1837	0.157	0.083
Mood					
Intervention group	0.73 ± 2:10	1:10 0:31±	-5848	-1000	0.000
Control group	1:52 ±0.90	1:52 ± 0.90	0.000	0.000	1.000
Sensitivity					
Intervention group	0.47 ± 0.69	0.10 ± 0.31	-2.689	-0.362	0.015
Control group	0.15 ± 0.37	0.15 ± 0.37	0.000	0.000	1000

Table VI : Effect of dhikr therapy to anxiety in elderly (n = 38)

Source	Type III Sum of Squares	Df	Mean Square	F	Sig
Corrected models	164 763	2	82 381	52 837	0,000
Intercept	2,513	1	2,513	3,264	0079
Pre-test	85 157	1	85 157	140 776	0,000
Group	101 542	1	101.542	163.892	0.000
Error	26.948	35	0.770		
Total	1957.000	38			
Corrected Total	191.711	37			

treatment has an influence on the level of anxiety in elderly individuals with diminished cognitive function.

Table 4.5 showed the results of the analysis on the domains of anxiety scores in the intervention group; multiple significant reductions were observed in the fear domain (p-value = 0.007), concern domain (p-value = 0.000), mood domain (p-value = 0.000), and sensitivity domain (p-value = 0.015). Meanwhile, the control group showed significant improvements in their domains, including a mean difference of 0.210 in the concern domain and a mean difference of 0.083 in the domain of physical symptoms.

According to table 4.6, a significant difference in anxiety level scores following dhikr therapy was observed in the intervention group compared to the control group that did not get dhikr therapy, with Mean Square = 82,381, F = 106,997, and p-value = 0.000 (p0.05). This suggests that the outcomes of testing the second hypothesis, thus Ho is rejected and Ha is accepted. Implying that there is a substantial difference in the anxiety levels of the intervention group and the control group prior to and during dhikr treatment.

DISCUSSION

Anxiety in the Elderly
In this study, the average result of the elderly experiencing anxiety was at the age of 64.76, the gender was female with the result 59.3%, the last education level was SD 74.1%. This is in line with previous study stated that the elderly aged 65 years are very vulnerable to a number of physical and psychological diseases related to age, stress such as: weakness, loss of loved ones, immobility and decreased independence(16). This is most likely to happen to women because the life expectancy of women is higher than that of men. Based on research, it is stated that elderly women are 3.37 times more at risk of experiencing anxiety than men (17). The relationship between education and

the occurrence of anxiety have a significant negative correlation between the level of anxiety and the level of education (18). The higher the education of the respondents, the lower the level of anxiety and the lower the education level of the respondents, the higher the level of anxiety.

Based on the research that has been done, the results of moderate anxiety in the elderly are 65.8% with mild cognitive function decline. Research findings indicate that cognitive function is associated with individuals experiencing anxiety. This is likely due to changes in brain function in the elderly with cognitive impairment so that it can affect the work of the brain and hormones that influence the process of anxiety.

Differences in anxiety levels in the intervention group before and after receiving dhikr therapy
The results of this study indicated that the intervention group have seen a decrease in anxiety scores following the treatment of dhikr therapy. This is consistent with previous research which demonstrated a significant decrease in anxiety levels in the intervention group with results indicating that pretest respondents experienced severe anxiety but improved to mild anxiety after receiving the dhikr therapy intervention (19). These findings are also consistent with previous study demonstrating that dhikr therapy, as a religious intervention or spiritual practice, can have a beneficial effect on mental health, such as anxiety reduction (13).

According to multiple domains, there is a decrease in the intervention group following the intervention. This is consistent with another research, which showed that dhikr has a significant correlation with mental tranquility in the elderly (13). This is supported by research conducted in Yogyakarta, which indicates that resignation increases individuals' ability to confront difficulties in a way that minimizes anxiety (12).

According to the findings of this study, the control group reported an increase in several domains prior to and following the intervention, including the worry domain, where the mean difference was 0.210, and the physical symptom domain, where the mean difference was 0.157. The increase in each domain indicates that there is no significant difference between the control and intervention groups, with a p-value of 0.056. Additionally, it explained why three respondents' scores increased several times, which was considered due to gender factors, the three respondents in the control group. Although the percentage of control group members who experienced no change in their anxiety scores before and after the intervention increased considerably slightly in several domains, it was expected that the control group would be able to manage their anxiety in order to prevent it from becoming more severe. Although the percentage of control group who experienced no change in their anxiety scores before and after the intervention increased considerably slightly in several domains, it was expected that the control group would be able to manage their anxiety in order to prevent it from becoming more severe.

In this study, the intervention group experienced lower anxiety than the control group, due to the intervention group receiving treatment through dhikr dance therapy intervention. According to study before, dhikr therapy utilizing dhikr and Asmaul Husna readings can help to reduce anxiety levels in elderly of nursing homes (12). Furthermore explained that employing dhikr therapy helps to reduce anxiety levels in senior residents of nursing facilities. Dhikr recitation generates a positive understanding and develops optimism that any situation can be overcome. Additionally, dhikr is known to be an Islamic relaxation technique because it helps to soothe tense emotions. This research was also previously supported by previous study who showed that dhikr therapy is effective against anxiety and improving sleep quality in the elderly (20).

Psychologically, the effect of remembrance that occurs in the conscious dimension will foster the appreciation of the presence of God, who is always present in humans under any conditions. Many researchers have tried to find a relationship between science (neuroscientific concepts) and the spiritual dimension, which until now is still unclear, but it is believed that there is a relationship. As in the study on people with anxiety disorders, which was presented in his book entitled Brain and Religion: Undigested Issues, it is believed that there is a God Spot in the central nervous system (brain), so that sufferers will become calm when they perform prayers accompanied by remembrance. From a mental health perspective, remembrance contains a deep psychotherapeutic element. Psychoreligious therapy is equally important

as psychotherapy psychiatry tricks because it contains spiritual power that instills self-confidence and optimism (11). The spiritual content in remembrance with the ability of metaphysical touch that is not possessed in meditation is a very influential component in building mental strength in every individual involved in remembrance activities. The success of secular-oriented meditation practice as a self-help method in overcoming various life problems, both physically, psychologically, and socially, cannot be denied, although the effects obtained are short-term. In short, the effect obtained from meditation is thought to be because meditation does not include metaphysical potential and the structure of religious beliefs, which are actually components of human nature (12).

In this study, there are several limitations to the study. The existence of these limitations may exist in the researchers themselves or from other factors. In this study, the intervention given was in the form of dhikr therapy to reduce the level of anxiety in the elderly so that only those who were Muslim could intervene. Due to the limited time of the study, the researcher could not carry out follow-up after the posttest to see the compliance and consistency of the elderly in carrying out the therapy outside the study. Another limitation is related to the number of samples and convincing the samples to take part in this study.

CONCLUSION

This study showed that there were no significant differences in gender, education, or marital status between the intervention and control groups, but there was a significant difference in anxiety scores between the elderly who received dhikr therapy intervention and those who did not. Dhikr therapy has been shown to decrease anxiety among elderly experiencing cognitive impairment. This study suggests that nurses can provide dhikr therapy as one of the nursing activities which can be used to prevent anxiety among the elderly in the community as well as in institutions.

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