

Dhikr Therapy for Reducing Anxiety in Cancer Patients

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ABSTRACT

Objective: Anxiety in cancer patients can affect recovery time, medication adherence, and patient quality of life. Some studies show that dhikr therapy can improve relaxation and can reduce anxiety, but research on dhikr therapy in cancer patients is still not widely done. This study aims to determine the effect of dhikr therapy on reducing anxiety in cancer patients. **Methods:** This study used a quantitative method with a quasi-experimental-nonequivalent control group design. The study was conducted in April–May 2018, with respondents 20 people in the intervention group and 20 people in the control group. Dhikr therapy is given once a day in the intervention group with a minimum time of

10 min. Anxiety was measured using the Visual Analog Scale for Anxiety. The effect of dhikr therapy was measured using the Mann–Whitney and effect size (ES). **Results:** There were a statistically significant differences in the anxiety level of patients in the intervention group and the control group, with a value of $P = 0.001$ ($P < 0.05$) and $ES = 0.87$ ($ES > 0.5$) indicating the influence of dhikr therapy in reducing patient anxiety. **Conclusions:** Dhikr therapy has a great effect on reducing anxiety in cancer patients.

Key words: Anxiety, cancer patient, dhikr therapy, visual analog scale for anxiety

Introduction

Cancer is the number 2 cause of death in the world and resulted in 8.8 million deaths in 2015.^[1] The prevalence of cancer in Indonesia in 2013 was 1.4% with the highest prevalence coming from DI Yogyakarta Province which was 4.1%.^[2]

Cancer diagnosis and treatment can have an impact on the patient's physical and psychological condition.^[3] The most common psychological problems found are depression and anxiety.^[3,4] Cancer patients who experience anxiety range from 10% to 30% and the prevalence of newly diagnosed patients is known to be higher compared to

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patients who have undergone treatment that is around 93%.^[5-7]

Anxiety is an unpleasant experience, related to real or imaginary perceptions, and is a common problem that occurs in cancer patients.^[8,9] Anxiety is related to the side effects of chemotherapy or radiotherapy treatments, lack of social or personal control, deterioration of physical conditions, thoughts of death, and life after death.^[10,11] In addition, anxiety often arises during the process of cancer screening, treatment, and when relapse.^[11]

Anxiety must be addressed immediately because it can affect the length of recovery, medication adherence, and quality of life of the patient.^[12,13] Management of anxiety in cancer patients can be done with a pharmacological approach and psychological therapy.^[14] However, only about 50%–65% of cancer patients benefit from antidepressants or cognitive behavioral therapy, and there are still many patients who continue to experience anxiety even when undergoing therapy/treatment, and hence, treatment with a different approach is needed in addition to anxiety treatment, namely using complementary alternative medicine (CAM).^[14-16] CAM therapy consists of traditional medicine, acupuncture, herbal preparations, music therapy, and other psychological therapies, physical and spiritual therapy.^[17,18]

Dhikr therapy is a spiritual approach that is nonpharmacological, inexpensive, noninvasive, and without side effects.^[19] Dhikr means remembering Allah, which is a practice based on meditation that can be done individually or collectively.^[20] Dhikr can be done by studying and meditating on the verses of Allah both kauliyah (Quran) and kauniyah (universe/creation).^[21]

Dhikr therapy is able to purify the heart of all negative things (attitudes and emotions), freeing from worldly pressure, anxiety, despair, depression, can increase strength and spiritual vitality, and arouse the spirit of life in the heart.^[22] Several studies have shown that dhikr therapy is able to reduce anxiety in preoperative patients, pre-coronary artery bypass graft surgery, burns, and has been shown to be more effective in reducing anxiety than patients who only use conventional therapy.^[23-27] However, research related to the effect of dhikr therapy on cancer patients is still not widely done. We conducted this study to determine the effect of dhikr therapy on reducing anxiety in cancer patients.

Methods

Patients

The sampling technique used consecutive sampling, which determines the respondents according to the inclusion criteria determined by the researcher. The location

was a general hospital in Central Java Indonesia and was conducted in April–May 2018.

The inclusion criteria were patients aged ≥ 18 years, diagnosed with cancer with various treatments (chemotherapy, surgery, etc.), functional status with a Karnofsky Performance Status index score of $\geq 50\%$, Muslims, willing to be respondents, and patients experiencing anxiety with Visual Analog Scale for Anxiety (VAS-A) score 5–74 mm. The exclusion criteria were patients in an emergency, experiencing a decrease in consciousness, using anxiolytic drugs (thiopental, flumazenil), experiencing cognitive impairments with a Short Portable Mental Status Questionnaire index score (SPMSQ) > 2 , and experiencing severe anxiety with VAS-A score > 74 mm.

The sample in this study amounted to 40 respondents who were divided into two groups, namely the intervention group and the control group. This research was approved by the Medical and Health Research Ethics Committee Faculty of Medicine, Public Health and Nursing UGM No. KE/FK/0352/EC/2018, and has been conducted in April–May 2018 in one of the Central Java Province referral hospitals.

Intervention group

The intervention group received treatment in the form of dhikr therapy given once a day before or 2 h after meals. Dhikr therapy given with a minimum duration of 10 min, and during the study, the average time needed by the respondents was 15 min.

Dhikr therapy can be done by patients independently or guided by others (family, nurses, etc.). During the study, respondents were guided by the researcher. Respondents followed each direction given by the researcher and were given a guidebook containing the dhikr therapy procedure. The dhikr therapy procedure given is as follows: (1) The patient believes that dhikr can make the heart calm so that it can affect the patient's health condition. (2) The attitude of the patient's body: the patient sits or lies according to the situation. (3) Patients pray before dhikr therapy is performed, and the eyes begin to close. Patients pray by reading Ta'awudz, Basmallah, Hamdallah, Syahadat, and Shalawat. (4) Breathing: the patient takes a deep breath slowly and the lungs with air, the patient holds his breath for about 5 s, and exhales slowly. (5) Relaxation in: patients concentrate fully and relax with deep breathing techniques, and the patient imagines the energy from inhaled nature. When the breath is slowly released, the patient says the word "Allah" and imagines all illnesses, bad temperament, and negative feelings come out. Patients dhikr with other dhikr sentences such as Astaghfirullahal'adzim, Subhanallah, Laailaaha illallah, Laa hawlaa walaa kuwwata illa billah with the same technique. (6) Prayers and affirmations:

patients rub their palms against the head, face, chest, and place of pain, then imagine energy flowing throughout the body. Patients say prayers according to expectations and ask for health to God by saying: Yaa Syaafi', Yaa Salaam, Yaa Rohman, Yaa Rohiim, O Allah Astagfirullah, Alhamdulillah (×1); Bismillahi (×3); A'uudzubillahi wa qudrotihi min syarrimaa ajidu wa uhadziruu (×7).

Control group

The control group received standard care, namely daily care given in the ward. The control group was given dhikr therapy after the data collection was completed.

Measurement

Anxiety is measured before and after dhikr therapy, using VAS-A in the form of a straight line (horizontal) with a scale of 100 mm or 10 cm, with the left end indicating no anxiety, and the right end indicating exceptional anxiety.^[28,29] The interpretation of the VAS-A is 0–4 mm means it is not anxiety, 5–44 mm is mild anxiety, 45–74 mm is moderate anxiety, and 75–100 mm is severe anxiety.^[30]

VAS-A has a sensitivity level of 76.8%, specifications 64.9%, and consistency of internal reliability (Cronbach's $\alpha \geq 0.7$).^[28] The VAS-A reliability value is $r = 0.75$ by using the test–retest method with an interval of 5 min, and $r = 0.75$ with an interval of test–retest time for 1 week,^[31] and hence that the VAS-A instrument can be declared valid and reliable for use in cancer patients.^[28]

Statistical analysis

The data in this study were tested using the SPSS Program Version 16.0 (IBM Corp. Armonk, New York, USA), and presented in the form of tables and images. Categorical data are presented in the form of frequency and percentage. Numerical data are presented in the form of mean, median, and standard deviation (SD). The influence of respondent's characteristic variables on outcomes was analyzed using a simple linear regression test. The influence and magnitude of the influence of dhikr therapy on anxiety between the two groups were analyzed using the Mann–Whitney and effect size (ES). Differences in anxiety scores before and after intervention in each group were measured and using the Paired t -test and Wilcoxon Signed-rank test. The normality test in this study uses Shapiro–Wilk.

Results

Table 1 shows the demographic characteristics of the respondents. Most of the respondents were women, namely 65% in the intervention group and 70% in the control group. The average age of respondents in the intervention group was 46.85 years (\pm SD 12.62), and 49.30 years (\pm SD 13.47) in the control group. Most

of the respondents' marital status is married (90%), and education level is ≤ 10 years. Most cancers in the intervention group were gynecological cancer (25%), and breast cancer in the control group (30%). The duration of illness of most respondents in the intervention group was 20.1 months (\pm SD 15.43), and 30.45 months (\pm SD 43.33) in the control group. The type of therapy that has been undertaken by most respondents in the intervention group is chemotherapy (55%), and surgery and chemotherapy in the control group (60%). Most of the respondents did not have comorbidities, the average Karnofsky Performance Status score was 76% (\pm SD 11.87) in the intervention group, and 75.5% (\pm SD 13.16) in the control group, and the average SPMSQ score was 9.15 (\pm SD 0.74) in the intervention group, and 9 (\pm SD 0.79) in the control group.

Figure 1 shows the respondent's anxiety baseline. The average anxiety of respondents in the intervention group was 46.05 (\pm SD 18.42) and 45.50 (\pm SD 15.55) in the control group.

Effect of dhikr therapy on decreasing anxiety in cancer patients

The results showed that there were significant differences between anxiety levels in the intervention group and control group, with a value of $P = 0.001$ ($P < 0.05$). In addition, the ES value shows a result of 0.87 which means that the dhikr therapy intervention has a large effect on the decrease in anxiety in cancer patients. The difference in the difference between the median anxiety between control and intervention group also showed -20 which means that clinically the provision of dhikr therapy can significantly reduce anxiety in cancer patient (cutoff point ≥ 7) [Table 2].

The magnitude of the decrease in anxiety in the intervention group showed a mean value of -21.85 (\pm SD 12.61) which meant a clinically significant decrease in anxiety (cutoff point ≥ 7) [Table 3].

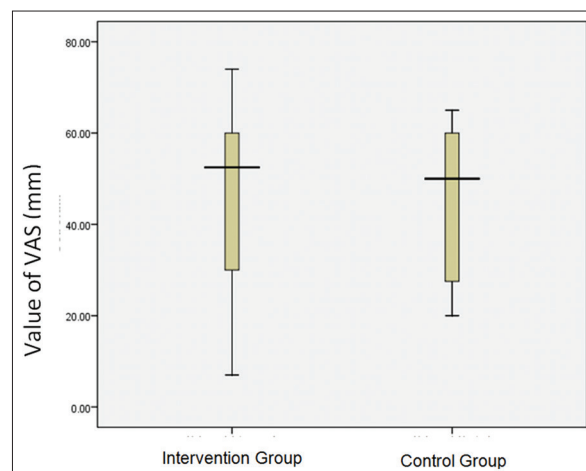


Figure 1: Anxiety level baseline in intervention group and control group

Table 1: Characteristics of respondent

Characteristics	Intervention group (n=20)		Control group (n=20)		P
	Frequency (%)	Mean ±SD	Frequency (%)	Mean ±SD	
Gender					
Male	7 (35)		6 (30)		0.736 ^a
Female	13 (65)		14 (70)		
Age		46.85 ± 12.62		49.30 ± 13.47	0.989 ^b
Marital status					
Married	18 (90)		18 (90)		1.000 ^c
Not married	2 (10)		2 (10)		
Education (years)					
≤10	16 (80)		14 (70)		0.390 ^c
11-13	4 (20)		4 (20)		
≥14			2 (10)		
Types of cancer					
Gynecology	5 (25)		3 (15)		0.504 ^c
Breast	4 (20)		6 (30)		
Lungs	2 (10)		0 (0)		
Colorectal	4 (20)		4 (20)		
Etc.	5 (25)		7 (35)		
Long illness		20.1 ± 15.43		30.45 ± 43.33	0.654 ^d
Type of therapy					
Not yet therapy	2 (10)		2 (10)		0.053 ^c
Surgery	1 (5)		1 (5)		
Chemotherapy	11 (55)		3 (15)		
Surgery and Chemotherapy	5 (25)		12 (60)		
Surgery, chemotherapy and radiotherapy	1 (5)		2 (10)		
Karnofsky scale		76 ± 11.87		75.5 ± 13.16	0.944 ^c
SPMSQ		9.15 ± 0.74		9 ± 0.79	0.543 ^c

^aAnalysis used χ^2 , ^bAnalysis used Independent t-test, ^cAnalysis used Mann-Whitney, ^dAnalysis used fisher exact. SPMSQ: Short Portable Mental Status Questionnaire, SD: Standard deviation

Table 2: Anxiety decrease difference between control group and intervention group (n=40)

Group	Median average value difference of anxiety in both groups		
	Median (minimum-maximum)	P	ES
Control	0.00 (0.00-5.00)	0.001 [*]	0.87
Intervention	20.00 (3.00-55.00)		

^{*}Significant ($P < 0.05$), analysis used Mann-Whitney. ES: Effect size value ES=0.1 (minor effect), ES=0.3 (medium effect), and ES=0.5 (major effect)

Discussion

Dhikr therapy has a significant effect and a large effect on anxiety reduction in patients. Dhikr therapy is only done in a few minutes,^[32] but has been able to affect the body's neurotransmitters, and increase parasympathetic nerve activity and suppress sympathetic nerve activity,^[33-35] so as to achieve a condition of relaxation and reduce patient anxiety.^[23,36,37] Some studies also show that dhikr therapy is able to reduce anxiety in preoperative patients and in patients with chronic kidney failure.^[27,28,38]

Dhikr therapy can reduce anxiety in cancer patients is also influenced by several factors, such as high patient confidence in the intervention given. Dhikr therapy is in accordance with the teachings of Islam, and patients believe

that dzikir activities can soothe the soul, and hence, it is often applied when doing treatment. These beliefs help patients to overcome the effects of various diseases, and trigger positive emotions that include well-being, happiness, hope, and optimism,^[39] so as to reduce anxiety, pain, and social isolation, and increase life satisfaction in cancer patients.^[40-43]

Family support is also an important factor that influences the success of dhikr therapy in reducing anxiety. Before agreeing to be a respondent and accepting intervention, some patients requested their family's approval first and wanted to be accompanied when intervention was given. Strong family support can compensate for the negative effects of stress, lead to reduced pressure, and provide more positive views about life and future.^[44] The success of dhikr therapy is also influenced by the way the application of therapy. Dhikr therapy in this study is done by closing the eyes and deep breathing techniques, with the aim of increasing concentration and relaxation. The implementation of dhikr therapy requires concentration, and hence that it is able to focus on certain sentences of dhikr or prayer which are recited repeatedly and accompanied by submissiveness to God.^[45] The way to be

Table 3: Differences in decreased anxiety in each group (n=40)

Group	Average value difference of anxiety in each group			
	Mean ± SD	Median (minimum-maximum)	P	95% CI
Control				
Pretest	45.50 ± 15.55	50.00 (20.00-65.00)	0.125 ^a	0.10-1.60
Posttest	44.75 ± 15.25	50.00 (20.00-65.00)		
Intervention				
Pretest	46.05 ± 18.42	52.50 (7.00-74.00)	0.001 ^{a,b}	15.94-27.75
Posttest	24.20 ± 18.94	26.00 (0.00-60.00)		

*Significant (P<0.05). ^aAnalysis used Wilcoxon Signed rank test, ^bAnalysis used Paired t-test. CI: Confidence interval, SD: Standard deviation

able to focus on the spoken dhikr sentence is to choose a relaxed position, closed eyes, do deep breathing techniques, and relax all body muscles.^[36,38,46-48]

Limitations

The small number of respondents is a limitation in this study. Another limitation is that dhikr therapy can only be given to Muslims so that it cannot be used in general. Further research is expected to be able to use respondents in large numbers and other types of spiritual therapy (various religions) can be used to treat cancer patients.

Implication and suggestion

Dhikr therapy can reduce anxiety in cancer patients. It shows the importance of fulfilling spiritual needs and the development of the use of spiritual therapy for the treatment of cancer patients.

Dhikr therapy is a simple therapy, which consists of deep breathing and contains dhikr sentences commonly spoken by Muslims, so patients can easily apply them. Therefore, it is expected that medical team (nurses, doctors, etc.,) can apply and teach dhikr therapy to patients.

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Conflicts of interest

There are no conflicts of interest.

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