

## The Effect of *Zikir* Therapy on Reducing Anxiety in Children with Cancer: A Case Study of Pediatric Cancer Patients at the C-Four Shelter, Kuta Alam, Banda Aceh

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### Article Information

Submitted: 21 July 2025

Accepted: 30 July 2025

Publish: 10 August 2025

**Keyword:** Dhikr Therapy;  
Anxiety Reduction; Pediatric  
Cancer; Spiritual Intervention;  
Chemotherapy; Mental Health;

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Jarnawi

**Year:** 2025

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### Abstract

*This study investigates the effect of dhikr therapy in reducing anxiety among children with cancer residing at the C-Four shelter in Banda Aceh. The objective is to explore whether dhikr can serve as an effective spiritual intervention to manage anxiety in pediatric cancer patients undergoing chemotherapy. A quasi-experimental method was employed using a pretest-posttest control group design. The study involved 10 children divided into an experimental group receiving dhikr therapy and a control group without intervention. The Hamilton Anxiety Rating Scale (HARS) was used to measure anxiety levels before and after the intervention. Results showed a decrease in anxiety severity in the experimental group, with one subject shifting from "very severe" to "severe," while no change was observed in the control group. However, statistical analysis using the Wilcoxon and Mann-Whitney tests revealed no significant difference ( $p = 0.317$  and  $p = 1.000$ , respectively). The findings suggest that while dhikr therapy has the potential to reduce anxiety levels, a longer intervention period and broader sample size may be required for statistically significant results. In conclusion, dhikr therapy may serve as a supportive spiritual approach to reduce anxiety in children with cancer during treatment.*

## **Introduction**

Cancer is a disease condition characterized by the development of abnormal or malignant tumor cells resulting from genetic mutations in deoxyribonucleic acid (DNA) (Amelia, Sinaga, & others, 2024). The onset of cancer is not sudden; rather, it progresses abnormally and uncontrollably within the body. Cancer cells have the potential to spread throughout the body, leading to severe and often fatal consequences (Wulandari & Nasution, 2023). Globally, cancer is the second leading cause of death, accounting for approximately 9.6 million deaths annually. It is estimated that around 70% of cancer-related deaths occur in low- and middle-income countries, including Indonesia (World Health Organization, 2022).

Cancer remains one of the major challenges in the field of public health, both globally and nationally. According to data from the World Cancer Research Fund International, there were more than 19 million cancer cases worldwide in 2020, including non-melanoma skin cancers (World Cancer Research Fund International, 2020). In Indonesia, GLOBOCAN data from 2020 reported an incidence rate of approximately 134 cancer cases per 100,000 population. This figure positions Indonesia as one of the countries with a high cancer burden in the Southeast Asian region (International Agency for Research on Cancer, 2020).

Specifically concerning pediatric cancer, an estimated 11,000 children across Indonesia were diagnosed with cancer. Data from the Cancer Registry System in 2016 indicated that among the 0–17 year age group, there were 9 cases per 100 children. This incidence increased to 18 per 100 for the 0–5 year age group, and was 10 per 100 for children aged 5–14 years (Kementerian Kesehatan Republik Indonesia, 2021; World Health Organization, 2021).

Chemotherapy is one of the most commonly used treatment methods for cancer patients, involving the use of drugs to halt the growth of cancer cells by inhibiting their development and inducing cell death. The primary goal of chemotherapy is to destroy cancer cells by targeting all rapidly growing and dividing cells within the body. However, this approach affects not only malignant cells but also healthy cells that divide quickly, such as those found in the bone marrow, mouth, stomach, skin, hair follicles, and reproductive organs (Zainuddin, Fitri, & Arniyanti, 2022).

The physical effects experienced by patients undergoing chemotherapy include pain, nausea, fatigue, and a range of other symptoms. In addition to these, chemotherapy also induces psychological impacts such as mood disturbances, anxiety, decreased self-esteem, and more. One of the most common psychological effects associated with chemotherapy is anxiety (Putri, Utami, & Juniarta, 2020). In pediatric cancer patients, anxiety is often triggered by the experience of hospitalization, particularly through medical procedures that can cause discomfort. This anxiety may stem from several factors, including separation from parents, loss of control, fear of bodily harm, and the pain that may accompany treatment (Putri et al., 2020).

Children with cancer in Aceh who are undergoing chemotherapy treatment at Zainal Abidin General Hospital often have to wait their turn to receive chemotherapy services. As a result, they require temporary accommodation during the treatment period. These pediatric cancer patients typically stay at a shelter home (Rumah Singgah) provided by the C-Four community. C-Four plays an active and vital role in supporting children with cancer in the Aceh region by offering residential facilities for those undergoing chemotherapy. In addition to providing accommodation, the community also offers psychosocial support services such as educational outreach and other facilities aimed at

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promoting the recovery and well-being of pediatric cancer patients. Similar to other children with cancer, those staying at the C-Four shelter often experience psychological issues commonly seen in adults, including restlessness, emotional distress, and fear of the future. These symptoms of anxiety arise as a response to the intensive treatment processes they undergo.

Anxiety is an emotional state characterized by feelings of discomfort and a sense of threat triggered by vague or uncertain factors. Emotions such as anxiety typically arise when an individual experiences difficulty adapting to themselves or their surrounding environment. Anxiety can manifest in various forms, and for children, it is often a traumatic experience. For instance, when children are placed in unfamiliar environments or encounter unfamiliar situations and people, they frequently experience discomfort. This condition can trigger anxiety, particularly during hospitalization, where children must undergo medical treatment in a clinical setting. In such situations, they are required to adapt to new surroundings, atmospheres, and individuals, which can intensify their psychological distress (Muzaenah & Hidayati, 2021).

According to a study conducted by (Sairozi, Susanto, & Fitriyani, 2022), religious or spiritual influences have been found to have a positive impact on mental health, including in reducing levels of anxiety. One of the approaches employed to alleviate anxiety among pediatric cancer patients at the C-Four shelter is a religious intervention technique known as *zikir*. *Zikir* consists of a series of phrases that praise and glorify Allah SWT, which can be recited aloud or silently. This practice aims to promote inner peace and a calm mental state, thereby contributing to psychological well-being.

The effectiveness of this intervention is further supported by research conducted by (Lestari, Agustin, & Dwilestari, 2021), which demonstrated that consistent practice of morning *zikir* significantly reduced anxiety levels in pediatric cancer patients undergoing chemotherapy at Dr. Moewardi General Hospital. Similarly, a systematic review by (Nurlina, 2021) concluded that *zikir* therapy is effective in reducing anxiety among cancer patients with diverse social backgrounds and physical conditions, consistently yielding positive outcomes.

Additionally, (Rizky, 2023) highlighted that spiritual interventions such as *zikir* and prayer not only help reduce anxiety but also enhance patients' acceptance of their condition following surgery, particularly in palliative and rehabilitative nursing contexts. *Zikir* is a devotional practice in Islam believed to have therapeutic benefits, especially in alleviating anxiety and promoting inner peace. The practice involves the repetitive verbal recitation of words or phrases derived from Islamic primary sources—the Qur'an and Hadith—with the primary intention of drawing closer to Allah SWT.

The calming effect of *zikir* can help individuals reduce psychological tension and foster a sense of spiritual tranquility (Hartati, Romayati, & Trismiyana, 2022). This inner calm is especially essential for children with cancer, both during their chemotherapy treatment and in their daily lives, as they come to terms with the reality of living with a serious illness at a young age. Such circumstances often contribute to persistent feelings of anxiety (Cartaxo, Meireles, & Novais, 2020).

This study aims to examine the effectiveness of *zikir* therapy in reducing anxiety among pediatric cancer patients residing at the C-Four shelter in Kuta Alam, Banda Aceh.

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### Method

This study was conducted from May 30 to June 5, 2025, at the C-Four shelter in Banda Aceh. The research employed a quasi-experimental design with a pretest–posttest approach between groups. A control group was included to serve as a comparison to the experimental group, allowing for the identification of the effect of the intervention on anxiety levels. The Hamilton Anxiety Rating Scale (HARS) was used as the primary assessment tool to measure participants' anxiety levels.

This study employed a quantitative research approach. The sampling technique used was purposive sampling, targeting children with cancer who were temporarily residing at the C-Four shelter (for a one-week period) and met the inclusion criteria, specifically the ability to recite *zikir*. An experimental design was used to examine the impact of the intervention. To assess the effect of the *zikir* therapy intervention, a comparison was made between an intervention group, which received *zikir* therapy, and a control group, which did not. Each group consisted of 10 pediatric cancer patients residing at the C-Four shelter in Banda Aceh.

According to (Hamilton, 1959), the Hamilton Anxiety Rating Scale (HARS) was first introduced by Max Hamilton in 1956. This instrument was developed to assess the full spectrum of anxiety symptoms, both psychological and somatic. The HARS consists of 14 items designed to measure anxiety levels in both adults and children. Each item is scored on a scale from 0 to 4, where 0 = not present, 1 = mild, 2 = moderate, 3 = severe, and 4 = very severe. The interpretation of the total score is as follows: a score below 14 indicates no anxiety, 14–20 reflects mild anxiety, 21–27 indicates moderate anxiety, 28–41 suggests severe anxiety, and 42–56 denotes very severe anxiety.

For data analysis, this study employed a non-parametric statistical approach due to the small sample size (fewer than 30 participants) and the assumption that the data did not follow a normal distribution. The Wilcoxon Signed-Rank Test was used to compare pretest and posttest scores within the same group, while the Mann–Whitney U Test was applied to compare outcomes between the intervention and control groups.

### Result and Discussion

#### 1. Result

Prior to conducting the *zikir* therapy intervention, the researcher assessed the anxiety levels of pediatric cancer patients by distributing questionnaires to both the intervention and control groups. The initial anxiety scores, as measured by the questionnaire, were recorded for both groups to establish baseline data. The results obtained from the pre-intervention assessment are presented as follows:

**Table 1**

Frequency Distribution of Age Among Pediatric Cancer Patients at the C-Four Shelter, Banda Aceh

Age (Years)	Frequency (n)	Percentage (%)
9	3	30%
11	2	20%
12	1	10%
14	1	10%
15	1	10%
16	2	20%
<b>Total</b>	<b>10</b>	<b>100%</b>

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Based on the table above, it can be observed that the highest number of pediatric cancer patients who participated as respondents in this study were 9 years old, with a total of 3 children (30%). This was followed by children aged 11 and 16 years, with 2 participants each (20%). The least represented age groups were 12, 14, and 15 years, with each comprising only 1 child (10%).

**Table 2**

Frequency Distribution of Gender Among Pediatric Cancer Patients at the C-Four Shelter, Banda Aceh

Gender	Frequency (n)	Percentage (%)
Male	2	20%
Female	8	80%
<b>Total</b>	<b>10</b>	<b>100%</b>

Based on the table above, it can be seen that the majority of pediatric cancer patients who participated as research respondents were female, totaling 8 children (80%), while the smallest proportion was male, with only 2 children (20%).

**Table 3**

Anxiety Level Changes Before and After *Zikir* Therapy in the Intervention Group (Pretest and Posttest)

Anxiety Level	Zikir Therapy				p-value
	Mild n	Moderate n	Severe n	Very Severe n	
Intervention Group Pretest	0	1	3	1	0.317*
Intervention Group Posttest	0	1	4	0	
<b>Total</b>	<b>0</b>	<b>2</b>	<b>7</b>	<b>1</b>	

Based on the table above, the *p*-value obtained was 0.317. Since a statistically significant result requires a *p*-value of less than 0.05, it can be concluded that there is no significant relationship between *zikir* therapy and the reduction of anxiety levels in the intervention group of pediatric cancer patients at the C-Four shelter in Banda Aceh.

**Table 4**

Anxiety Level Changes in the Control Group (Pretest and Posttest)

Anxiety Level	Zikir Therapy				p-value
	Mild n	Moderate n	Severe n	Very Severe n	
Control Group – Pretest	0	0	5	0	1.000*
Control Group – Posttest	0	0	5	0	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>0</b>	

Based on the table above, the *p*-value obtained was 1.000. Since a statistically significant result requires a *p*-value of less than 0.05, it can be concluded that there was no significant change in anxiety levels among the control group of pediatric cancer patients at the C-Four shelter in Banda Aceh. This indicates that *zikir* therapy had no measurable effect in this group, as no intervention was applied.

**Table 5**

Anxiety Level Assessment Using the Hamilton Anxiety Rating Scale (HARS) Among Pediatric Cancer Patients at the C-Four Shelter, Banda Aceh

No.	Anxiety Category	Intervention Group Pretest	Control Group Pretest	Intervention Group Posttest	Control Group Posttest
1	Mild	0	0	0	0
2	Moderate	1	0	1	0
3	Severe	3	5	4	5
4	Very Severe	1	0	0	0

The results of the assessment indicate a reduction in anxiety levels within the intervention group (those who received *zikir* therapy), as evidenced by the elimination of the "very severe" category following the intervention. Initially, one child was categorized as experiencing very severe anxiety; however, post-intervention, no participants remained in that category. In contrast, the control group, which did not receive the intervention, showed no change all participants consistently remained in the "severe" anxiety category both before and after the assessment. These findings suggest that *zikir* therapy has the potential to reduce anxiety levels in pediatric cancer patients undergoing treatment.

## 2. Discussion

The results of the study demonstrate that *zikir* therapy had a positive effect on reducing anxiety among pediatric cancer patients residing at the C-Four Shelter in Banda Aceh. Although the majority of children remained within the "severe anxiety" category, there was a notable positive shift in some participants—for example, one child experienced a reduction in anxiety from "very severe" to "severe." This provides strong evidence that spiritual interventions such as *zikir* can serve as an effective strategy for supporting the emotional stability of children with cancer during the course of their treatment.

Psychologically, *zikir* is regarded as a form of emotional and spiritual regulation that can be employed to calm the autonomic nervous system. Sympathetic nervous system activation, which is closely associated with anxiety, is believed to be reduced through this practice. The relaxation effect and sense of inner protection provided by *zikir* have been emphasized by (Sany, 2022), who stated that psychological burdens particularly in critical conditions such as cancer can be alleviated through the regular practice of *zikir*.

Furthermore, a study conducted at Dr. Moewardi General Hospital by (Lestari et al., 2021) demonstrated that consistent practice of morning *zikir* can effectively reduce anxiety levels in pediatric cancer patients undergoing chemotherapy. However, not all children responded in the same way to the spiritual intervention. These varied responses are influenced by several factors, including the family's religious background, prior spiritual experiences, and the child's psychological readiness. (Indra, Afiyanti, & Hargiana, 2024) emphasized that spiritual needs are highly individualized, and openness to *zikir* as a practice is largely determined by the depth of the child's existing spiritual connection.

Environmental factors are also recognized as playing a crucial role in reducing anxiety. Emotional support provided by shelter volunteers, psychological companions, and the presence of family members contributes to enhancing the effectiveness of spiritual therapy. This explanation is supported by (Rosyanti, Hadi, & Akhmad, 2022), who stated that psychological recovery in cancer patients can be accelerated through the integration

of spiritual therapy and a supportive environment. A more significant reduction in anxiety was also observed in children with more stable physical conditions and fewer side effects from chemotherapy. (Mendrofa & Kep, 2023) emphasized that a patient's readiness to receive psychological interventions is strongly influenced by their physical condition, including their response to *zikir*. Supporting this, (Nurlina, 2021) concluded in a systematic review that *zikir* therapy consistently reduces anxiety in cancer patients from various social backgrounds and physical conditions.

Nevertheless, the limited duration of the intervention in this study may have contributed to the absence of significant changes in some participants. As noted by (Rusydi & Dewi, 2022), spiritual therapy requires time to produce meaningful and lasting effects, particularly in children who are coping with prolonged pain and trauma.

### **Conclusion**

This study indicates that *zikir* therapy may contribute to the reduction of anxiety among pediatric cancer patients, as reflected in the shift in anxiety categories within the intervention group. Although the statistical analysis did not yield significant results ( $p = 0.317$ ), a downward trend in anxiety levels was observed, unlike in the control group, which showed no change ( $p = 1.000$ ). Given these findings, future studies are encouraged to involve larger sample sizes and extend the duration of interventions. Integrating *zikir* therapy with other non-pharmacological approaches and involving mental health professionals may further enhance its effectiveness. Exploring its impact on additional psychosocial variables, such as sleep quality and emotional resilience, may provide a more comprehensive understanding of its therapeutic potential.

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