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The Effect of Dzikir in Reducing Anxiety in Patients Undergoing Modified Radical Mastectomy (MRM)

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Abstract:
Anxiety is a psychological problem often experienced by preoperative patients, especially in cases of breast cancer requiring major surgery such as Modified Radical Mastectomy (MRM). This condition can increase physiological stress, disrupt hemodynamic stability, slow down the healing process, and even affect prognosis. Non-pharmacological spiritual interventions, such as dzikir, are believed to help patients manage anxiety. This study aims to analyze the effect of dzikir on anxiety levels in preoperative MRM patients at Sultan Agung Islamic Hospital in Semarang. A quantitative study with a one-group pre-test post-test design was conducted on 30 patients who met the inclusion criteria. Anxiety levels were measured using the Depression Anxiety Stress Scale (DASS-42) questionnaire before and after the intervention. Data analysis used a paired t-test with a significance level of 0.05. Patients' anxiety levels before the intervention were in the moderate to severe category, with an average score of 26.4. After receiving dzikir istighfar therapy twice daily over an 8-hour observation period, the average anxiety score decreased to 15.2. The paired t-test showed a significant difference (p = 0.002). Dzikir therapy had a significant effect in reducing the anxiety levels of patients prior to MRM surgery. Dzikir can be used as a complementary intervention in perioperative nursing care, especially in hospitals based on Islamic values.

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INTRODUCTION

Breast cancer remains a leading global health challenge, representing the most commonly diagnosed cancer among women worldwide and a significant cause of mortality (Arnold et al., 2022). Effective treatment often necessitates surgical intervention, with Modified Radical Mastectomy (MRM) being a cornerstone procedure for advanced or locally advanced disease. MRM involves the comprehensive removal of the entire breast tissue, including the nipple-areolar complex, overlying skin, and a substantial portion of the axillary lymph nodes, with the aim of achieving oncological clearance and reducing the risk of local recurrence and metastatic spread. Its established efficacy in cancer control makes it a critical component of multimodal breast cancer management (Golara et al., 2024).

While MRM is vital for survival, its profound physical alteration carries substantial psychological consequences for patients. The loss of a body part deeply intertwined with female identity, sexuality, and self-perception triggers significant distress (Cernikova et al., 2024). Patients frequently grapple with intense concerns regarding altered body image, diminished self-esteem, fears about partner

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acceptance, and anxieties surrounding future intimacy and femininity. This complex psychological burden is not merely a postoperative phenomenon; it significantly shapes the patient's experience and emotional state prior to the surgical event (Guijarro et al., 2023).

Preoperative anxiety is a near-universal experience among patients facing major surgery, and MRM patients are particularly vulnerable. This anxiety manifests as intense apprehension, persistent worry, feelings of tension, and dread about the surgical procedure, potential complications, anesthesia, and the uncertain future (El-Gabalawy et al., 2024; Uysal et al., 2023). In the context of breast cancer, this anxiety is often amplified by the existential threat of cancer, the fear of death, the anticipated loss of a breast, and concerns about treatment efficacy and long-term prognosis, creating a uniquely distressing psychological state before the operation (Maheu et al., 2021).

The physiological manifestations of heightened preoperative anxiety, such as elevated heart rate, increased blood pressure, and heightened sympathetic nervous system activity, are not merely uncomfortable; they pose tangible clinical risks. Unmanaged anxiety can lead to suboptimal physiological responses during surgery, including increased sensitivity to pain, greater difficulty with anesthesia induction and maintenance, and a heightened risk of intraoperative complications (Grocott et al., 2023). Furthermore, persistent anxiety is associated with delayed wound healing, increased postoperative pain perception, higher analgesic requirements, prolonged hospital stays, and a greater likelihood of developing postoperative complications, ultimately impacting overall recovery trajectories (Tola et al., 2021).

Given the limitations and potential side effects of pharmacological anxiolytics, there is a growing emphasis on evidence-based, non-pharmacological strategies to mitigate preoperative anxiety (Kisielewska et al., 2024). Techniques such as guided relaxation, music therapy, cognitive-behavioral therapy (CBT), and hypnotherapy have demonstrated efficacy in various surgical settings. Within culturally and spiritually diverse populations, particularly in Muslim-majority contexts or among Muslim patients globally, spiritual and religious interventions offer a relevant and accessible avenue for psychological support, aligning with patients' core beliefs and coping mechanisms (Elyasi et al., 2021).

Dhikr (also transliterated as zikir or dhikr), a core Islamic spiritual practice, presents a promising non-pharmacological intervention for this population (Irfansya & Azizah, 2024; Nabila et al., 2024). It involves the mindful remembrance of Allah (God) through the rhythmic recitation of sacred phrases (kalimat thayyibah), such as Subhanallah (Glory be to God), Alhamdulillah (Praise be to God), Allahu Akbar (God is Greatest), and Astaghfirullah (I seek forgiveness from God). Rooted in the Qur'anic principle that "Verily, in the remembrance of Allah do hearts find rest" (Qur'an 13:28), dhikr is believed to induce profound psychological calm. Mechanistically, its repetitive, focused nature is theorized to reduce sympathetic arousal, lower physiological stress markers, and foster a deep sense of inner peace and spiritual connection, directly countering the symptoms of anxiety (Purwanti et al., 2024; Alifa et al., 2025).

Despite the strong theoretical foundation for dhikr in reducing distress and the well-documented prevalence of severe preoperative anxiety in MRM patients, there is a notable paucity of rigorous empirical research specifically investigating its efficacy within this precise clinical context. Existing studies on spiritual interventions often lack specificity regarding the surgical procedure or the unique psychosocial stressors of mastectomy (Khoirunisak et al., 2024). Therefore, this study aims to address this critical gap by empirically evaluating the effect of a structured preoperative dhikr intervention on the level of anxiety experienced by patients scheduled to undergo Modified Radical Mastectomy, contributing essential evidence for culturally sensitive, holistic preoperative care in oncology nursing.

Volume 03 Number 05
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METHOD

This study used a quantitative approach with a one-group pre-test post-test pre-experimental design. This design was chosen because it is suitable for assessing the effect of an intervention on the same group by comparing the results of measurements before (pre-test) and after (post-test) treatment.

In this study, the independent variable was the dzikir (istighfar) therapy, while the dependent variable was the anxiety level of patients undergoing Modified Radical Mastectomy (MRM). This design was considered appropriate because it allowed researchers to evaluate changes in the psychological condition of respondents immediately after the intervention was administered.

Design scheme: O1 → X → O2

Description:

O1 : Measurement of anxiety levels before dzikir therapy (pre-test)

X : Intervention in the form of dzikir therapy (istighfar)

O2 : Measurement of anxiety levels after dzikir therapy (post-test)

The study was conducted in the surgical ward of Sultan Agung Islamic Hospital in Semarang from May to June 2025. The research instrument consisted of the Depression Anxiety Stress Scale (DASS)-42 questionnaire to measure the anxiety levels of patients prior to Modified Radical Mastectomy (MRM) surgery. The reliability test was used to measure the extent to which measurements using the same object produced the same data results.

Data was collected using a self-administered questionnaire distributed directly to respondents after obtaining informed consent. The collected data were then coded, entered, and analyzed using the Marginal Homogeneity test to determine the relationship between dzikir therapy and patient anxiety levels. The analysis results were interpreted using a significance threshold of p-value < 0.05.

Ethical approval for this study was obtained from the Health Research Ethics Committee of Sultan Agung Islamic University, Semarang (Permit Number: 2927/B/RSI-SA/VI/2025). All respondents signed informed consent forms and were assured of confidentiality, anonymity, and voluntary participation in accordance with established ethical research principles.

RESULT

The results of this study describe the characteristics of the respondents, as well as the outcomes of univariate and bivariate analyses, among patients in the surgical ward of Sultan Agung Islamic Hospital in Semarang. The data are presented in a table using an open table model (only horizontal lines), with the table centered, the title at the top, and explanatory sentences in the middle.

Respondent Characteristics

The following table shows the frequency distribution based on the respondents' age, type of claim, education level, and occupation. Most respondents were over 40 years old. All respondents were female. Most respondents had a high school education (50%). Most respondents are employed (70%)

Table 1. Characteristics of Respondents Based on Age, Gender, Education, and Occupation (n=30)

Criteria	Frequency (f)	Percentage (%)
Age (years)		
Early Adulthood (18 – 39)	2	6.67
Middle Adulthood (40 – 59)	24	80.00
Older Adulthood (≥60)	4	13.33
Gender		
Male	0	0
Female	30	100.00
Education		
Elementary school	8	26.67
Middle school	15	50.00
Higher school	7	23.33
Occupation		
Working	21	30.00
Not Working	9	70.00

Univariate Analysis

The following table presents the distribution of anxiety levels before dzikir therapy was administered. Most of the respondents have severe anxiety (57%).

Table 2. Respondents' Anxiety Levels Before Dzikir Therapy Was Administered

Level	Depression		Anxiety		Stress	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Mild	0	0%	0	0%	0	0%
Moderate	12	40%	9	30%	11	37%
Severe	9	30%	17	57%	14	47%
Very Severe	9	30%	4	13%	5	17%
Total	30	100%	30	100%	30	100%

Bivariate Analysis

The following table presents the distribution of anxiety levels before and after dzikir therapy.

Table 6. Respondents' Anxiety Levels After Receiving Dhikr Therapy

Pre-Test	Post-Test										P Value
	Mild		Moderate		Severe		Very Severe		Total		
	f	%	f	%	f	%	f	%	f	%	
Mild	0	0%	0	0%	0	0%	0	0%	0	0%	0.002
Moderate	3	10%	6	20%	0	0%	0	0%	9	30%	
Severe	0	0%	7	23%	10	33%	0	0%	17	57%	
Very Severe	0	0%	4	13%	0	0%	0	0%	4	13%	
Total	3	10%	17	57%	10	33%	0	0%	30	100%	

Description: Marginal Homogeneity Test, significant $p < 0.05$

The results of the analysis show that there is a significant relationship between dhikr therapy and the anxiety levels of patients ($p = 0.002$).

DISCUSSION

The findings of this study demonstrate that dhikr—a spiritually grounded, repetitive remembrance of God—significantly reduces preoperative anxiety among patients undergoing

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Modified Radical Mastectomy (MRM). With a pre-intervention mean anxiety score of 26.4 (indicating moderate to severe anxiety) dropping to 15.2 post-intervention, the results underscore the therapeutic potential of dhikr in a clinical surgical context. The demographic profile of respondents—predominantly middle-aged (40–60 years), with secondary education and homemaking roles—aligns with global breast cancer epidemiology and further contextualizes their heightened anxiety, which may stem from fears of mortality, bodily disfigurement, familial responsibilities, and limited health literacy. These psychosocial stressors, when compounded by the invasive nature of MRM, create a fertile ground for anticipatory anxiety, making non-pharmacological interventions like dhikr both timely and relevant (Isdianto et al., 2025).

From a psychoneuroimmunological perspective, the observed reduction in anxiety can be explained through dhikr's multi-systemic effects. Anxiety triggers the hypothalamic-pituitary-adrenal (HPA) axis and sympathetic nervous system, leading to elevated cortisol and physical manifestations such as tachycardia, restlessness, and diaphoresis (Hinds & Sanchez, 2022). Dhikr appears to counteract this cascade by inducing a relaxation response: psychologically, it redirects attention away from catastrophic thinking; physiologically, it lowers autonomic arousal; and spiritually, it fosters a sense of surrender and trust in divine will. This tripartite mechanism not only alleviates subjective distress but also potentially mitigates the immunosuppressive effects of chronic stress, thereby supporting holistic recovery (Yanti et al., 2023). The statistically significant p-value (< 0.002) further validates the intervention's efficacy, reinforcing its credibility as a therapeutic modality.

Integrating dhikr into perioperative care also resonates with Jean Watson's Theory of Human Caring, which emphasizes transpersonal healing and nurturing mind-body-spirit wholeness. By incorporating dhikr, nurses engage in authentic caring that transcends technical tasks, honoring the patient's cultural and spiritual identity (Gunawan et al., 2022). This is particularly pertinent in Islamic healthcare settings, where faith-based practices are not merely tolerated but are embraced as integral to the healing process. The simplicity, cost-effectiveness, absence of adverse effects, and cultural congruence of dhikr make it an ideal candidate for standardization within nursing protocols. Training nurses to facilitate dhikr sessions enhances patient-centered care while empowering patients to actively participate in their emotional and spiritual well-being before surgery (Attar, 2024).

Despite these encouraging outcomes, the study has limitations. The absence of a control group limits causal inference, while the small sample size reduces the generalizability of the results. Additionally, reliance on self-reported anxiety scales introduces potential response bias and lacks objective physiological corroboration (e.g., cortisol levels, heart rate variability). Future research should adopt a randomized controlled trial (RCT) design with larger, more diverse cohorts and incorporate biomarkers to quantify the biological impact of dhikr. Longitudinal studies could also assess whether the anxiolytic effects of dhikr persist into the postoperative period or influence recovery trajectories, pain perception, or even immune function.

In conclusion, this study provides compelling preliminary evidence that dhikr is a practical, culturally sensitive, and spiritually enriching intervention for mitigating preoperative anxiety in MRM patients. It highlights the necessity of integrating spiritual care into modern nursing practice, particularly in contexts where religion is a central component of patients' coping mechanisms (Badanta et al., 2022). As healthcare increasingly embraces holistic and integrative models, dhikr exemplifies how ancient spiritual disciplines can be seamlessly woven into contemporary clinical pathways—not as an alternative to medical care, but as a synergistic complement that nurtures the whole person (Rassool, 2024). Further rigorous investigation will solidify its place in evidence-based nursing interventions and potentially expand its application to other high-stress clinical scenarios.

Volume 03 Number 05
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CONCLUSION

This study demonstrates that dhikr is an effective complementary therapy in alleviating preoperative anxiety among patients undergoing Modified Radical Mastectomy. Prior to the intervention, most patients experienced notable levels of anxiety, reflecting the emotional and psychological burden associated with major surgery. Following the dhikr intervention, a marked reduction in anxiety was observed, indicating its calming influence on the mind, body, and spirit. The statistically significant improvement confirms that dhikr makes a meaningful contribution to emotional well-being during the preoperative period. As a simple, culturally appropriate, and non-invasive practice, dhikr holds strong potential for integration into holistic nursing care, particularly in settings where spiritual and religious values are central to patient healing and coping.

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CONFLICT OF INTEREST

The author declares that there are no financial or non-financial conflicts in the conduct and reporting of this research.

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