

THE EFFECT OF MINDFULNESS THERAPY IN IMPROVING THE QUALITY OF LIFE OF BREAST CANCER PATIENTS AT RADEN MATTAHER REGIONAL HOSPITAL

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ABSTRACT

Background :Non-pharmacological, psychospiritual interventions for breast cancer patients remain underexplored in the Indonesian context, particularly interventions that structurally combine dhikr (remembrance of God) and tadabbur (reflective contemplation) of Qur'anic verses. **Objective** : This study aimed to evaluate the effectiveness of mindfulness therapy in improving the quality of life of breast cancer patients at Raden Mattaher Regional Hospital, Jambi City. **Methods** : The study used a quantitative quasi-experimental pretest-posttest control group design, involving 36 respondents (18 in the intervention group, 18 in the control group) selected through purposive sampling. Quality of life, assessed through its spiritual well-being dimension, was measured using the FACIT-Sp-12 questionnaire before and after two weeks of therapy. Data were analyzed using the Wilcoxon and Mann-Whitney tests. **Results** : Results showed that the mean quality-of-life score in the intervention group increased from 35.41 (SD 6.413) to 44.65 (SD 2.178) ($p<0.001$), while the control group increased from 32.56 (SD 3.258) to 39.33 (SD 2.223) ($p<0.001$). However, the Mann-Whitney test on the difference in scores between groups showed no significant difference ($p=0.140$). **Conclusion** : It was concluded that mindfulness therapy has the potential to improve the quality of life of breast cancer patients, although it has not yet been statistically proven superior to standard care. Further research with a larger sample and a longer intervention duration is recommended to strengthen the evidence of its effectiveness.

Keywords: breast cancer; mindfulness therapy; quality of life; spirituality; FACIT-Sp-12.

INTRODUCTION

Breast cancer ranks first in cancer incidence among women worldwide, with an estimated 2.3 million new cases and 670,000 deaths in 2022, and is the most common type of cancer in 157 of 185 countries (World Health Organization, 2025). In Indonesia, the Indonesian Health Survey (2023) recorded a national cancer prevalence of 1.2%, with breast cancer being the type most commonly experienced by women. Data from the Jambi City Health Office (2022) show a sharp increase in cases, from 136 in 2018 to 731 new cases in 2022, while Raden Mattaher Regional Hospital, Jambi City (2024) recorded 261 breast cancer patients as one of the ten most common conditions among inpatients.

The diagnosis and treatment of breast cancer produce an impact that is not only physical but also psychological, social, and spiritual. Changes in body image, pain, and chronic fatigue contribute to social withdrawal and reduced interpersonal interaction (Al-Natour, Al-Momani and Qandil, 2022; Chen et al., 2021). Prolonged psychological distress also makes it difficult for patients to find meaning in their illness, thereby contributing to an overall decline in quality of life (Ng et al., 2020; Park et al., 2023). This condition confirms that the management of

breast cancer needs to go beyond a purely biomedical approach and address the psychospiritual dimension of patients.

Various non-pharmacological interventions, including psychospiritual approaches such as dhikr, prayer, and tadabbur of Qur'anic verses, have been developed to help patients find meaning in life and inner calm while undergoing treatment. One approach that has been increasingly studied is mindfulness therapy, namely the awareness that arises through deliberate, non-judgmental attention to the present moment (Kabat-Zinn, 2003). Mindfulness has been shown to be effective in reducing stress and anxiety and improving quality of life across various clinical populations, including cancer patients (Creswell, 2017; Zhang et al., 2015).

Research on mindfulness in breast cancer patients in Indonesia has tended to focus on breathing relaxation techniques or simple dhikr, using pre-experimental designs without a control group, so evidence regarding its effectiveness on quality of life remains limited. This study develops a mindfulness therapy that structurally integrates dhikr and tadabbur of Qur'anic verses, using a control group design, in order to answer the research question: is mindfulness therapy effective in improving the quality of life of breast cancer patients at Raden Mattaher Regional Hospital, Jambi City? This study aims to identify respondent characteristics and analyze the quality of life of patients in the intervention and control groups before and after mindfulness therapy.

METHODS

This study used a quantitative approach with a quasi-experimental pretest-posttest control group design, comparing an intervention group (receiving mindfulness therapy) with a control group (receiving standard hospital care) without full randomization. The study was conducted at the Surgical Outpatient Clinic of Raden Mattaher Regional Hospital, Jambi City, over two months (March-April 2026). The study population consisted of all female patients diagnosed with stage I-IV breast cancer undergoing outpatient care at the hospital, with a recorded population of 261 people.

The sample size was determined using the Federer formula, yielding a minimum of 16 respondents per group; the researchers set 18 respondents per group (36 respondents in total) to anticipate dropout, selected through purposive sampling based on inclusion criteria (women aged ≥ 18 years, Muslim, diagnosed with stage I-IV breast cancer, cooperative, willing to sign informed consent, and not having participated in a similar psychological intervention within the past month) and exclusion criteria (cognitive/psychiatric impairment, physically unstable condition, or withdrawal during the study). During the study, one respondent in the intervention group was unable to complete the posttest, so the final analysis involved 35 respondents.

Quality of life was measured using the Indonesian-language version of the FACIT-Sp-12 questionnaire. The instrument has been shown to be valid and reliable for measuring the spiritual well-being dimension in patients with chronic illness, including cancer, and was first developed and validated by Peterman et al. (2002). Its construct validity was established through confirmatory factor analysis, which showed that the 12 items were distributed across

the three core dimensions of Meaning, Peace, and Faith, with a loading factor > 0.40 for every item. In the Indonesian context, the instrument was culturally and linguistically adapted by the FACIT organization and re-tested in patients with chronic illness, yielding a validity coefficient of $r = 0.50$ and a reliability coefficient of $r = 0.768$, indicating that the Indonesian-language version of the FACIT-Sp-12 is appropriate for use in this study's population. As the FACIT-Sp-12 primarily captures the spiritual well-being dimension, in this study it was used as an indicator of patients' overall quality of life, and the two terms are therefore used interchangeably throughout this manuscript to refer to this construct. Total scores range from 0-48, with higher scores indicating better quality of life. The intervention group received mindfulness therapy consisting of a combination of dhikr and tadabbur of Qur'anic verses for two weeks (two sessions accompanied by the researcher and twelve independent practice sessions), while the control group received only standard care. Measurements were taken before (pretest) and after (posttest) the intervention period.

Data were analyzed univariately to describe respondent characteristics and the distribution of quality-of-life scores, and bivariate using the Wilcoxon Signed Rank Test to examine pretest-posttest differences within each group, and the Mann-Whitney test to compare the difference in scores (delta) between the intervention and control groups, given that the data were not entirely normally distributed. Data normality was assessed using the Shapiro-Wilk test, and all statistical analyses were performed using SPSS software, with a significance level set at $\alpha = 0.05$.

This study complied with research ethics principles, including informed consent, anonymity, confidentiality, justice, and beneficence and non-maleficence, and obtained ethical clearance from the Health Research Ethics Committee of Raden Mattaher Regional Hospital, Jambi City, under approval number S.279/SPE/VII/2026, dated July 2026.

RESULTS

The study involved 36 respondents at the initial stage and 35 respondents who completed the entire study. The characteristics of respondents in both groups are presented in Table 1.

Table 1. Distribution of Characteristics of Breast Cancer Patient Respondents (n=36)

Characteristics	Intervention group Frequency (f)	Percentage (%)	Control group Frequency (f)	Percentage (%)
Age				
30-39 yrs	3	16.7	1	5.6
40-49 yrs	6	33.3	6	33.3
50-59 yrs	6	33.3	10	55.6
60-69 yrs	3	16.7	1	5.6
Occupation				
Housewife	9	50.0	14	77.8
Civil servant	4	22.2	2	11.1
Teacher	3	16.7	1	5.6

Characteristics	Intervention group Frequency (f)	Percentage (%)	Control group Frequency (f)	Percentage (%)
Farmer	1	5.6	0	0
Self-employed	1	5.6	1	5.6
Last education				
Elementary school	5	27.8	4	22.2
Junior high school	1	5.6	1	5.6
Senior high school	2	11.1	9	50.0
Diploma (D3)	0	0	1	5.6
Bachelor's degree (S1)	10	55.6	3	16.7
Marital status				
Married	17	94.4	15	83.3
Unmarried	0	0	1	5.6
Divorced	1	5.6	2	11.1
Cancer stage				
I	2	11.1	3	16.7
II	3	16.7	4	22.2
III	7	38.9	5	27.8
IV	6	33.3	6	33.3
Duration of illness				
6 months - 1 year	5	27.8	7	38.9
>1 year	13	72.2	11	61.1
Total	18	100.0	18	100.0

The intervention group was dominated by respondents aged 40-59 years (66.6%), working as housewives (50.0%), with a Diploma/Bachelor's education (66.7%), married (94.4%), at stage III-IV (72.2%), and having had cancer for more than one year (72.2%). A similar pattern was found in the control group, with a higher proportion of housewives and advanced-stage patients (77.8% and 61.1%).

Table 2. Distribution of Quality-of-Life Category Before Mindfulness Therapy in the Intervention and Control Groups

Group	Quality-of-Life Level	Frequency (f)	Percentage (%)
Intervention	Low	0	0%
	Moderate	5	29.4%
	High	12	70.6%
Total		17	100%
Control	Low	0	0%
	Moderate	6	33.3%
	High	12	66.7%
Total		18	100%

Table 2 shows that before mindfulness therapy, respondents in the intervention group predominantly had a high quality-of-life category (70.6%). A similar pattern was found in the control group, which also predominantly had a high quality-of-life category (66.7%).

Table 3. Distribution of Quality-of-Life Category After Mindfulness Therapy in the Intervention and Control Groups

Group	Quality-of-Life Level	Frequency (f)	Percentage (%)
Intervention	Low	0	0%
	Moderate	0	0%
	High	17	100%
Total		17	100%
Control	Low	0	0%
	Moderate	0	0%
	High	18	100%
Total		18	100%

Table 3 shows that after mindfulness therapy, all respondents in both the intervention group and the control group had a high quality-of-life category (100%).

Table 4. Effectiveness of Mindfulness Therapy on the Quality of Life of Respondents in the Intervention and Control Groups

Variable	Mean	Std. Deviation	Std. Error Mean	Wilcoxon p-value	Mann-Whitney p-value
Pretest – Intervention group	35.41	6.413	1.555	<0.001	0.140
Posttest – Intervention group	44.65	2.178	0.528		
Pretest – Control group	32.56	3.258	0.768	<0.001	
Posttest – Control group	39.33	2.223	0.524		

The analysis in Table 4 shows an increase in the mean quality-of-life score in both the intervention and control groups. The Wilcoxon test showed a significant increase in both groups ($p < 0.001$). The Mann-Whitney test on the difference between posttest and pretest scores (delta) between the intervention and control groups yielded a p-value of 0.140 ($p > 0.05$), indicating no statistically significant difference in the improvement of quality of life between the two groups, although nominally the mean increase in the intervention group (9.24) was greater than in the control group (6.77).

DISCUSSION

The dominance of respondents aged 40-59 years is consistent with epidemiological data indicating that the incidence of breast cancer increases after age 40 due to the accumulation of DNA damage and a decline in cellular repair capacity (World Health Organization, 2025; Nindrea, Aryandono and Lazuardi, 2017). Most respondents were married and served as housewives, a condition that theoretically provides greater access to emotional support from partners and family (Yiallourou et al., 2024). Nevertheless, the dominance of advanced stage

(III-IV) disease in both groups had a dual effect: on one hand increasing physical and psychological burden, but on the other hand often prompting patients to engage in existential reflection that strengthens the search for spiritual meaning, as reflected in the fairly substantial increase in FACIT-Sp scores in this study.

The finding that the mean quality-of-life score in the intervention group increased significantly from 35.41 to 44.65 ($p < 0.001$) reinforces evidence that spiritually based mindfulness can improve the spiritual well-being of cancer patients, consistent with the meta-analysis by Zhang et al. (2015) and the more recent systematic review and meta-analysis by Wang et al. (2024), both of which reported the effectiveness of mindfulness-based interventions in improving quality of life and reducing psychological distress among cancer patients. However, contrary to the theoretical assumption that this effect is exclusive to the intervention group, the control group in this study also experienced a significant increase (32.56 to 39.33; $p < 0.001$) despite not receiving mindfulness therapy. This contrast indicates that the improvement in quality of life was not solely influenced by the experimental intervention, but was also shaped by contextual factors such as family support, the experience of adapting to an illness that had lasted more than a year for most respondents, and exposure to standard hospital care, which also contains elements of psychosocial support.

The non-significant Mann-Whitney test result ($p = 0.140$) for the difference in scores between groups contradicts the study's initial hypothesis, which assumed the superiority of mindfulness therapy over standard care. This finding differs from a number of studies reporting the superiority of mindfulness interventions over control groups (Creswell, 2017; Kriakous et al., 2021), but is consistent with the view that the effects of short-term psychospiritual interventions may be masked by regression to the mean and the natural process of patient adaptation to chronic illness, particularly in quasi-experimental designs without full randomization and with a relatively short intervention duration (two weeks). The dominance of respondents who were married and had suffered from cancer for more than one year in both groups was also a confounding variable that may have obscured the pure effect of mindfulness therapy, since patients with a longer illness experience generally have already developed their own spiritual coping mechanisms before the intervention was given.

Overall, mindfulness therapy based on dhikr and tadabbur of Qur'anic verses shows clinical potential in supporting the spiritual well-being of breast cancer patients, consistent with the role of nurses as awareness facilitators who accompany patients in facing the psychological and spiritual burden of chronic illness (Kabat-Zinn, 2003; Hashemi, Sabouri and Mirzaei, 2019). Although its superiority over standard care has not been statistically proven, its contribution to the increase in absolute quality-of-life scores in the intervention group indicates added value as a complementary nursing intervention worth integrating into holistic care, taking into account the limitations of sample size, the absence of full randomization, and the relatively short intervention duration in this study.

CONCLUSION

Mindfulness therapy based on dhikr and tadabbur of Qur'anic verses was shown to significantly improve quality-of-life (FACIT-Sp) scores among breast cancer patients in the intervention

group (from a mean of 35.41 to 44.65; $p < 0.001$), although this improvement did not show a statistically significant difference compared with the control group, which received only standard care ($p = 0.140$). These findings indicate that mindfulness therapy has the potential to become a beneficial complementary nursing intervention for the psychospiritual well-being of breast cancer patients, although its superiority over standard care requires further proof. Health institutions and nursing staff are advised to consider integrating this therapy into holistic care, while future researchers are advised to use a larger sample, full randomization, and a longer intervention duration to obtain stronger evidence of effectiveness.

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