



The Effectiveness of Yoga on Patients with Breast Cancer in Reducing Symptoms of Stress: Evidence-Based Review



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Abstract

This study was conducted to examine the scientific evidence regarding the effectiveness of yoga intervention on stress reduction for patients with breast cancer. PICO method was used to develop research question and a thorough review was conducted to identify most relevant evidence-based research related to the effectiveness of yoga on patients with breast cancer in reducing symptoms of stress. Our review revealed four studies suggesting that yoga exercises may reduce stress related symptoms associated with breast cancer patients. Yoga exercises are effective and helpful and could reduce symptoms of stress in patients with breast cancer.

Keywords: Yoga; Breast cancer; Stress; Distress mood

Introduction

Patients with breast cancer may have psychological and physical discomfort. Emotional responses may create barriers that prevent these patients from fully participating in their daily routines. Yoga enhances the patient's ability to cope with their stressful situation Banerjee [1] & Moadel [2]. The purpose of this study was to examine the scientific evidence regarding the effectiveness of yoga intervention on stress reduction for patients with breast cancer. For this study, we created a clinical/research PICO question (Population, Intervention, Comparison, and Outcome), a key to evidence-based decision Richardson et al. [3]. The PICO formed for our study is as follows:

P: For patients with breast cancer

I: Does a yoga program

C: Compared to other treatments

O: Reduce the symptoms of stress?

Methods

Review of literature and search strategy- A research has been made in the following databases: Ovid (MEDLINE, Psych INFO, and Global Health), and CINAHL. Keywords and Search items used to search articles for our study were Yoga, breast cancer, stress, distress mood. Four articles were selected related to the effectiveness of yoga on patients with breast cancer in reducing symptoms of stress. All articles were related to our PICO question. After all, the strongest evidence-based article was chosen using hierarchy of levels of evidence in evidence-based practice Hughes [4].

Results

Table 1 & 2 show a summary of the four articles in relation to our PICO.

Table 1: A summary of reviewed articles in relation to our PICO.

Article	Our PICO	Relate to PICO (Article PICO)
Banerjee et al. [1]	P: For patients with breast cancer	P: Patients with breast cancer
	I: Does a yoga program	I: Does a yoga program and counseling
	C: Compared to other treatments	C: Supportive counseling
	O: Reduce the symptoms of stress?	O: Yoga group reduced the symptom of anxiety, depression, stress, and the level of DNA damage
		Using yoga as an intervention for patients with breast cancer can significantly reduce the symptom of stress. (p <.001)

Moadel et al. [2]	P: Patients with breast cancer
	I: Does a yoga program
	C: Standard care
	O: Yoga group has significant improvement in emotional well-being and reduced distress mood (anxiety/sadness; irritability)
	Yoga intervention group had significant improvement in:
	*emotional well-being (p<.015)
	*spiritual well-being (p<.009)
	*distress mood: anxiety/sadness (p<.046) irritability (p<.027)
Reed et al. [6]	P: Patients with breast cancer
	I: Does a yoga program
	C: X (no comparison)
	O: yoga can reduce the symptoms of stress for gastrointestinal, emotional irritability, and cognitive disorganization, but the decrease was not significant
	Using yoga as an intervention for patients with breast cancer may reduce the symptoms of stress, emotional irritability, and cognitive disorganization
Carson et al. [5]	P: Patients with metastatic breast cancer
	I: Does a yoga program
	C: X (no comparison)
	O: Yoga did not consistently and significantly reduce the symptoms of stress.
	For treatment effects on daily outcomes after 8 weeks, the yoga program did not significantly reduce the daily distress or increase daily relaxation for patients with metastatic breast cancer. However, daily invigoration was significantly increased.

Table 2: Summary of reviewed articles.

	Banerjee et al. [1]	Moadel et al. [2]	Reed et al. [6]	Carson et al. [5]
Design	RCT	RCT	Crossover	Pre-post
Level of evidence	level II	level II	level III	level III
Total Sample size	N=58	N=164	N=36	N=13
Mean age of subjects	47±1.1	55.11±10.07	51.18	59
Interventions/per week (minutes)	90	90	75	960
Total intervention time (weeks)	6	12	7	8
Measurement Time	Baseline 6 weeks	Baseline 1 month 3 months 6 months	Baseline 7 weeks	Baseline 8 weeks/ the same day the next day
The outcome for reducing stress	Significant	Significant	Not significant	Not significant

Discussion

Banerjee et al. [1] which examined the effects of an integrated yoga program in modulating psychological stress and radiation-induced genotoxic stress in breast cancer patients undergoing radiotherapy was selected as the strongest evidence in our study. It was a level II randomized control trial (RCT) with significance level of $P < .001$ after 6 weeks. Thus, clinical guidelines, recommendations, a plan and audit tool have been developed in our study to implement yoga in clinics (Table 3).

Conclusion

Our review suggested that yoga exercises are effective and helpful and could reduce symptoms of stress in patients with breast cancer [5,6]. Thus, clinical guidelines, recommendations, a plan and audit tool have been created in our study to implement yoga programs in clinics. The clinical guidelines for recommended intervention, the plan, and the audit tool recommend therapists to apply yoga exercises with patients with breast cancer and stress.

Table 3: A summary of recommendations, plan, and audit tool.

Recommendation	Implementation Plan	Criteria	Audit Method	Compliance Plan
1. Three therapists will attend Yoga program training.	Three therapists will be recruited and scheduled to attend the Yoga program training.	The three therapists will complete the Yoga training within two months.	A training file, which will be reviewed weekly, includes attendance sheets for each training session and a certificate for completing the two-month training.	If the therapists do not attend the program, a note will be recorded on the Yoga training file.
2. The trained therapists will make one set of Yoga movements for a 90-minute session.	The trained therapists develop a serious of Yoga movements for 90 minutes based on their training program.	The set of Yoga movements will be completed in one month after the trainers finish their training.	Within one month, the trainers will complete a template that includes purpose, procedure, and Yoga movement patterns for this program.	If the template is not completed within one month, a note will be recorded in the Yoga plan file
3. The trained therapists will make a Yoga teaching video.	Based on the template, two trained therapists will perform Yoga movements, and one trained therapist will verbally explain the teaching video.	The teaching video will be completed within two weeks.	The video will be available for every staff member.	If the video is not completed within two weeks, a note will be recorded in the Yoga plan file.
4. The trained therapists will teach other staff members how to perform the Yoga program.	For one hour during every lunch break, staff members will separate into groups (≤five members for each group) to learn each movement pattern.	Within one month, 100 % of staff members will learn 100% of the Yoga movements in this program.	The trained therapist will weekly review an attendant sheet for each learning session within the one-month training.	If the therapists do not attend the learning session, a note will be recorded in his/her training file.
5. All staff members will present the Yoga program.	Staff members will perform the set of Yoga movements one by one for the three trained therapists.	The staff members should reach an 80% accuracy of all movements during the Yoga performance.	The trained therapists will report the competence level of each staff member.	Those staff members who fail to pass with an 80% accuracy will have to review the teaching video and again perform the movements for the trained therapists in two weeks.

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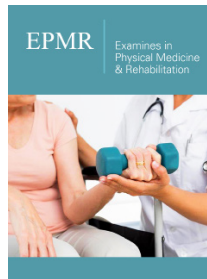
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