



# The effects of complementary therapy on quality of life and well-being in persons with a diagnosis of breast cancer



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## Introduction

Breast cancer (BC) is the second leading cause of cancer death in women, exceeded only by lung cancer. BC is most commonly diagnosed in non-Hispanic, Caucasian women living in the United States. In 2014, approximately 232,670 new cases of invasive BC will be diagnosed among women, as well as an estimated 62,570 additional cases of in situ BC. Today, there are more than 2.8 million BC survivors living in the United States.<sup>1,3</sup>

For the purpose of our study, complementary and alternative medicine (CAM) is defined as “products and practices that are not part of standard care”. Complementary therapy is any treatment that is used together with standard care, as opposed to alternative therapy which is treatment that is used in place of standard care. CAM therapies included in this study are yoga, Tai Chi, dance/movement, and Pilates.

Women with BC often suffer from severe psychological stress, impacting their quality of life (QoL) and increased potential for disease progression and/or recurrence.<sup>13</sup> Patients may utilize CAM as a way to (1) regain control over their bodies, (2) develop therapeutic relationships with caregivers/providers, (3) alleviate side-effects from treatment, and (4) improve overall QoL.

## Methods

Articles were selected following a comprehensive search of 4 databases (MEDLINE/PubMed, CINAHL, ProQuest Nursing and Allied Health Source, and JAMA) for randomized control trials (RCTs) published up until April 2014. Inclusion criteria involved (1) female and male participants aged 18 years or older (2) confirmed clinical diagnosis of breast cancer stage 0-III and (3) peer-reviewed articles from 2004 to 2014. Exclusion criteria involved (1) manual lymphatic drainage interventions and (2) stage IV breast cancer. These search terms yielded 1,112 articles.

After assessing inclusion criteria and removal of duplicates a total of 26 articles were included in the systematic review. RCTs examining the effects of yoga, Tai Chi, dance/movement, and Pilates versus a control group receiving no intervention, on QoL in patients with breast cancer were included. Two independent reviewers used the validated PEDro Scale to evaluate the methodological quality of the included studies.

## PRISMA

Studies identified through database searching

n=1,112

Studies remaining after duplicates removed

n=1,055

Potentially appropriate studies to include

n=386

Studies included in this systematic review

n=26

## Results

Twenty six studies (16 yoga, 6 Tai Chi, 3 dance/movement, 1 Pilates) involving 1,880 (1,406 yoga, 321 tai chi, 111 dance/movement, 42 Pilates) persons with breast cancer were included. Sample sizes varied from 21 to 271 participants and the associated PEDro scores ranged from 3 (poor) to 8 (good). The average age of the participants was 54.24 years old.

The primary outcome measures used to assess quality of life included the Functional Assessment of Cancer Therapy for Breast Cancer (FACT-B), Medical Outcomes Study Short Form 36 (MOS SF-36), and the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire /Breast Cancer Module (EORTC QLQ C30/BR23).

All 26 studies reported positive effects on breast cancer treatment-related side effects with the greatest impact on quality of life. Statistical significance was found in favor for the use of yoga, Tai Chi, dance/movement and Pilates in patients with breast cancer.

## Conclusions

This systematic review indicates that the complementary therapy interventions of yoga, Tai Chi, dance/movement, and Pilates are low-risk and can be effective in improving the quality of life and well-being in persons diagnosed with breast cancer.

Based upon these findings yoga has been the most frequently studied and has the highest quality of evidence as a complementary therapy in clinical management. Further well-designed RCTs with larger sample sizes are needed to further substantiate the use of Tai Chi, dance/movement and Pilates for this population.

This information offers clinicians additional evidence based options to offer to patients including complementary therapy interventions of yoga, Tai Chi, dance/movement, and Pilates are low-risk which may be effective in improving the quality of life and well-being in patients diagnosed with breast cancer.

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