

Effect of Pilates in Breast Cancer Patients Undergoing Hormonal Therapy: A Systematic Review of RCTs

Jasleen Kaur Grover, BPT Student, Department of Physiotherapy, Maharishi Markandeshwar Institute of Physiotherapy and Rehabilitation, Maharishi Markandeshwar (Deemed to be University), Mullana, Ambala, Haryana, India.

Sandeep Pattnaik, Assistant Professor, Department of Physiotherapy, Department of Musculoskeletal Physiotherapy, Maharishi Markandeshwar Institute of Physiotherapy and Rehabilitation, Maharishi Markandeshwar (Deemed to be University), Mullana, Ambala, Haryana, India.

Nitin Bhardwaj, Department of Physiotherapy, Shri Guru Ram Rai Medical University, Dehradun, India.

Akshat Sehgal, BPT Student, Department of Physiotherapy, Maharishi Markandeshwar Institute of Physiotherapy and Rehabilitation, Maharishi Markandeshwar (Deemed to be University), Mullana, Ambala, Haryana, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:

Sandeep Pattnaik,

Assistant Professor, Department of Musculoskeletal Physiotherapy, Maharishi Markandeshwar Institute of Physiotherapy and Rehabilitation, Maharishi Markandeshwar (Deemed to be University), Mullana, Ambala, Haryana, India.

E-mail: sandeep.pattnaik@mmumullana.org

ABSTRACT

Breast cancer is a prevalent form of cancer that primarily originates in breast tissue, affecting women predominantly. It is characterized by the uncontrolled growth of cells, which may metastasize to other body parts if untreated. Hormonal therapy is a crucial treatment, by blocking or reducing the production of hormones like estrogen and progesterone, It prevents cancer cells from growing and spreading. Post-treatment complications following hormonal therapy can significantly impact a patient's quality of life and overall well-being. Pilates focuses on physical fitness including core strength, flexibility, posture, muscle tone, balance, and mental well-being. It emphasizes on strength, flexibility, and mind-body integration, and presents a promising intervention to address these challenges. Database including PubMed, Cochrane Library, PEDro, and Google Scholar using keywords related to "plantar fasciitis," "Breast Cancer", "Hormonal therapy" and "Pilates" from 2018 till date. Included RCTs involved adults (11-80 years) with breast cancer stage 0-III breast cancer undergoing hormonal therapy. excluding those with active cancer or limitations that could hinder physical activity. The outcomes considered in the study were related to the Quality of life, Physical

fitness, Self-esteem, Depression, Pain, Disability, and Balance of the women having breast cancer. Data from all databases 2852 initially searched articles including 963 duplicates, only 79 were screened based on titles and abstracts. Amongst them based on the area of interest, few articles were excluded as 71 were irrelevant to breast cancer or Pilates or didn't include hormonal therapy as a treatment option, 1 was a pilot study and 2 were just the abstract. Therefore, upon scrutiny only 5 articles are included in this systematic review Following PRISMA guidelines, study quality was evaluated using CONSORT, PEDro, and ROB 2. PROSPERO registration was done with ID CRD42024568245. As a result, Pilates was found to have positive effects on physical function, mental health, and symptom management in breast cancer patients undergoing hormonal therapy. However, the studies varied regarding Pilates programmes design and sample size. Pilates may be a beneficial intervention for breast cancer patients undergoing hormonal therapy. Further research is needed to confirm the long-term benefits and develop evidence-based implementation guidelines.

Keywords: Breast Cancer, Hormonal Therapy, Pilates, Quality of life