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Evaluating the Impact of Pilates on Muscular Strength in Post-menopausal Women: A Systematic Review Protocol

Pushti, BPT Student, Department of Physiotherapy, Maharishi Markandeshwar Institute of Physiotherapy and Rehabilitation, Maharishi Markandeshwar (Deemed to be University), Mullana, Ambala, Haryana, India.
Kanika Bhatia, Assistant Professor, Department of Physiotherapy, Maharishi Markandeshwar Institute of Physiotherapy and Rehabilitation, Maharishi Markandeshwar (Deemed to be University), Mullana, Ambala, Haryana, India.
Rittu Sharma, Assistant Professor, 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:

Kanika Bhatia,

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

E-mail: kanikabhatia995@gmail.com

ABSTRACT

Post-menopausal phase is determined by decline in oestrogen levels in women, leading to reduction in muscle strength, flexibility and overall physical function. These changes increase the risk of musculoskeletal disorders and thus consequently impair mobility and effects the quality of life. However, lack of data on Pilates efficacy in improving muscular strength in postmenopausal women highlights the urgent demand for further research to assess its role in strength enhancement. This study will review the evidence on effectiveness of Pilates for enhancing muscular strength and improving overall physical function in post-menopausal women.The electronic databases PubMed, Scopus, Pedro and Cochrane Library will be searched to find Randomised Controlled Trials (RCTs). Studies included in this review will be conducted among post-menopausal women, which will involve Pilates as the main intervention, and must have outcome(s) related to muscular strength. Isokinetic dynamometer of knee extensors and flexors, Lumbar Extension machine, Sit-and-reach test, trunk lift tests, 30-sec chair stand test will be the primary outcome measures. Non-RCT study designs and non-English studies will be excluded. The review is registered in the PROSPERO database ID: CRD42024620100, following the PRISMA guidelines. Although previous research indicates that Pilates can improve physical strength, but the data is inconsistent due to methodological differences. This systematic review will seek to provide a comprehensive understanding of Pilates as a potential intervention for musculoskeletal health in postmenopausal women by investigating factors such as adherence, supervision, and exercise intensity. Additionally, evaluating impact of Pilates this review will contribute to the findings that will further enable evidence-based clinical and rehabilitation practices.

Keywords: Core stability, Flexibility, Post-menopause.