

Efficacy of Tai Chi on Pain and Physical Function in Individuals with Hip Osteoarthritis

RAMITA ARORA¹, SANJIB KUMAR DAS²

ABSTRACT

Introduction: Hip Osteoarthritis (OA) is a degenerative joint disorder causing pain, stiffness, and reduced physical function, thereby affecting quality of life. Tai Chi has emerged as a promising mind-body intervention for OA; however, comparative evidence between the simplified 8-form and traditional 24-form Tai Chi remains limited, particularly in the Indian population.

Aim: To compare the effects of 8-form Tai Chi, 24-form Tai Chi, and conventional physiotherapy on pain, physical function, and functional mobility in individuals with hip OA.

Materials and Methods: A randomised controlled trial was conducted on 86 participants (45-60 years) with confirmed hip OA (ACR criteria, Grade I-III) recruited from clinics in Delhi NCR. Participants were randomly allocated into three groups: Group 1 (8-form Tai Chi+conventional physiotherapy), Group 2 (24-form Tai Chi+conventional physiotherapy), and Group 3 (conventional physiotherapy only). Interventions were provided twice weekly for

six weeks. Outcomes included the Numerical Pain Rating Scale (NPRS) and the Timed Up and Go (TUG) test, assessed at baseline, Week 4, and Week 6. Data were analysed using mixed-design ANOVA with Bonferroni post hoc correction.

Results: All groups showed significant improvement over time ($p < 0.001$). The 24-form Tai Chi group demonstrated superior outcomes on TUG ($p = 0.001$) compared to the 8-form group. NPRS pain reduction was comparable between both Tai Chi groups ($p > 0.05$), with both outperforming the control group. Effect sizes ranged from large to very large ($\eta^2 = 0.521-0.959$).

Conclusion: Both Tai Chi forms produced clinically meaningful improvements in hip OA. The 24-form showed superior functional outcomes, while the 8-form provided comparable pain relief, making it a suitable entry-level intervention for elderly or deconditioned individuals.

Keywords: Functional mobility, Randomised controlled trial, Timed up and go.

PARTICULARS OF CONTRIBUTORS:

1. MPT Student, Department of Physiotherapy, Amity Institute of Health Allied Sciences, Amity University, Noida, Uttar Pradesh, India.
 2. Associate Professor, Department of Physiotherapy, Amity Institute of Health Allied Sciences, Amity University, Sector-125, Noida, Uttar Pradesh, India.
- ORCID: 0000-0002-5083-5001

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

Dr. Sanjib Kumar Das,
Associate Professor, Department of Physiotherapy, Amity Institute of Health Allied Sciences, Amity University, Sector-125, Noida-201313, Uttar Pradesh, India.
Email: skdas@amity.edu; sanjib_bpt@yahoo.co.in