

## Comparative effect of mat pilates and egoscue exercises in asymptomatic subjects with lumbar hyper-lordosis - A randomized controlled trial

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### Abstract

**Background:** Lumbar hyperlordosis is considered as the main cause of low back pain. Correction of hyperlordosis will reduce the stress on the lumbar spine and improves posture. Clinical trials lacking where Mat Pilates, Egoscue exercises and Lumbar stabilization exercises are compared for their effect on spinal malalignment.

**Objectives:** To determine and compare the effectiveness of Pilates, Egoscue and Lumbar stabilization exercises for rectifying hyperlordosis angle in asymptomatic subjects with lumbar hyperlordosis.

**Methods:** The present study was A randomized controlled trial conducted on volunteer participants from health science University of Belagavi. Asymptomatic subjects with lumbar hyperlordosis (n=51) were randomly allocated to Pilates, Egoscue and Lumbar stabilization group. Outcome assessed were Index of lumbar lordosis, Pelvic tilt and tolerance to exercise performance which were measured at baseline and after four weeks.

**Results:** All subjects completed the entire study protocol with no loss to follow up. There was significant reduction in the hyperlordosis score ( $P < 0.001$ ) in the 3 study groups when compared for pre and post intervention scores. However, more reduction was seen in the Pilates and Egoscue groups compared to lumbar stabilization. Pilates and Egoscue groups were equally effective in lumbar lordosis angle ( $P = 0.68$ ) and pelvic tilt ( $P = 0.51$ ). Participants of pilates group graded the exercise with superior tolerance to performance ( $P < 0.0006$ ) than Egoscue and Lumbar stabilization.

**Conclusion:** Pilate's group and Egoscue group were equally effective and superior to lumbar stabilization group in correction of hyperlordosis. Further, ease of performance of exercises was rated high for Pilates than the Egoscue exercises. These exercises should be included by the clinicians in prevention or corrective rehabilitation towards spinal posture malalignments.

**Key words:** Posture, Lumbar spine, Hyperlordosis, Exercises

### Biography

Aarti Welling has completed her Master of Physiotherapy (Orthopaedic Physiotherapy) from KLE Institute of Physiotherapy, Belagavi Karnataka. She is presently working as Assistant Professor KAHER Institute of Physiotherapy, Belagavi with 05 years of teaching and research experience. She has received Dr MG Mokashi Students Choice Best Teacher Award in the year 2017. She has around 06 publications in national and international journals. She has been serving as editorial secretary for Indian Journal of Physical Therapy and Research for last 2 years. She [along with a colleague] has worked towards devising equipment 'ALGOCURE' which is an automated machine to assess and treat the myofascial trigger points. Successfully completed course on Matrix rhythm therapy basic and advanced, PILATES module I Back care, Orthopedic Manual Therapy, Certificate Course on health research Funded by the Ministry of HRD, Government of India & M2T Certified practitioner Level I and Level II. Her motive is to excel in the profession through hard work, research, skill and determination.



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