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Effect of core muscle strengthening on pain and balance among patients with knee osteoarthritis: an experimental study

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Knee Osteoarthritis is a common degenerative disorder which leads to pain, disability and alterations in the activities of daily living. Conventional treatment such as hot packs, strengthening and balance exercises are proven effective in the treatment of OA. Few more researches also discover the role of core muscles in loading of the tibia femoral joint. Weak core muscles might cause the usage of the affected limb to be minimized or compensated by another limb. This will inevitably lead to a repetitive use and injury of the affected knee. Hence, poor core stability can be the contributing factors that can lead to knee OA development as well as its progression. A good proximal stability will, be achieved with a strong core which will lead to distal stability. However, there is still a shortage of evidences which would highlight the role of core strengthening as a treatment modality in reducing pain or improving balance on OA knee patients. 40 patients already diagnosed by the orthopaedic surgeon with grade 2 & 3 in Kellgren-Lawrence Scale for OA knee were included in the study. Assessment of pain was done by using visual analogue scale (VAS) and assessment of balance was done by using timed up and go test (TUG). Core strength (CS) was assessed by using pressure biofeedback. Subjects were divided into experimental group and control group by systematic random sampling. The statistical analysis was done by using the using SPSS software (version16). Tests for normality indicate skewed data for VAS difference and CS difference. Hence non-parametric tests needed for the variables However TUG difference scores were found normally distributed hence they were analyzed with parametric tests. Results obtained have proved that core strengthening in addition with conventional physiotherapy treatment helps to reduce pain and improve balance in knee osteoarthritis patients.

Biography

Seema Saini has completed her Masters in Physiotherapy at Garhwal University and undergoing PhD programme at Sumandeep University (accredited NAAC Grade A). Total teaching and clinical experience of 13 years have exposed for critical thinking in the field of physiotherapy and helped in guiding many post graduate students for the Research activity. Eight publications in UGC approved indexed journals.

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