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Immediate impact of thoracolumbar fascia release techniques on range of motion, proprioception and muscular endurance in young, healthy individuals

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Objective: This research explores the immediate effects of Graston Technique (GT) and Myofascial Release (MFR) on the Thoracolumbar Fascia (TLF) in healthy young adults, specifically focusing on lumbar range of motion (ROM), lumbar and cervical proprioception, and trunk muscle endurance.

Methods: The study involved twenty-four healthy young individuals, randomly divided into two groups: GT (n=12) and MFR (n=12). The GT group received a fascial treatment using a Graston instrument, while the MFR group underwent manual myofascial treatment. Both techniques were administered in a single 10-minute session. Lumbar ROM (measured with a goniometer), lumbar proprioception (assessed using a digital inclinometer), cervical proprioception (measured with a CROM device) and trunk muscle endurance (evaluated with the McGill Endurance Test) were assessed both before and after the treatment.

Results: Participants' age, gender and body mass index were comparable between the GT and MFR groups ($p>0.05$). In both groups, there was a significant increase in lumbar ROM in the flexion direction ($p<0.05$) and a decrease in proprioceptive deviation angle during flexion ($p<0.05$). However, neither technique had a significant impact on cervical proprioception or trunk muscle endurance ($p>0.05$). Furthermore, no significant difference was found in the effectiveness of Graston and myofascial release ($p>0.05$).

Conclusion: The findings suggest that both Graston and myofascial release techniques effectively enhance lumbar ROM and proprioception in healthy young adults in the short term. These results indicate that both interventions can be utilized to promote TLF elasticity and improve proprioceptive response.

Keywords: Thoracolumbar fascia, fascial release, proprioception, range of motion.

Biography

Sobia Hasan is currently working in the Iqra University North Campus, Pakistan.

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