

fatigability has not been extensively studied during occupational standing. This study examined and correlated the rectus abdominus (RA), erector-spinae (ES), external oblique (EO), and gluteus-medius (GM) muscles' fatigability on both sides while standing in a confined area for 30 min.

Methods Median frequency EMG data were collected from 15 female clinical instructors with chronic LBP (group A) and 15 asymptomatic controls (group B) (mean age 29.53 ± 2.4 vs 29.07 ± 2.4 years, weight 63.6 ± 7 vs 60 ± 7.8 kg, and height 162.73 ± 4 vs 162.8 ± 6 cm respectively) using a spectrum analysis program. Data were collected in the first and last 5 min of the standing task.

Results Using Mixed three-way ANOVA, groupA showed significantly ($p < 0.05$) lower frequencies for the right and left ES, and right GM in the last 5min and significantly higher frequencies for the left RA in the first and last 5min than group B. In addition, the left ES and right EO, ES and GM in group B showed significantly higher frequencies and the left ES in groupA showed significantly lower frequencies in the last 5 min compared with the first. Moreover, the right RA showed significantly higher frequencies than the left in the last 5 min in groupB. Finally, there were significant ($p < 0.05$) correlations among the median frequencies of the tested four muscles on the same side and between both sides in both groups.

Discussion/Conclusions Clinical instructors with LBP are more liable to have higher trunk and gluteus-medius muscle fatigue than asymptomatic individuals. Thus, endurance training for these muscles should be included in the rehabilitation of such patients. Key words: Fatigability, Trunk, Gluteus-medius, EMG, Standing, LBP

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TRUNK AND GLUTEUS-MEDIUS MUSCLES' FATIGABILITY DURING OCCUPATIONAL STANDING IN CLINICAL INSTRUCTORS WITH LOW BACK PAIN

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Background Occupational standing is associated with low back pain (LBP) development. Yet, trunk and gluteus-medius muscles'

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