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Effectiveness of Neuromuscular Reeducation and Strengthening of Gluteus Maximus to Reduce Hamstring Tightness Among Bus Drivers

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ABSTRACT

AIM: The aim of the study is to find the effectiveness of neuromuscular reeducation and strengthening the gluteus maximus muscle for reducing the hamstring tightness among bus drivers.

BACKGROUND OF THE STUDY: The hip extensor muscles particularly the gluteus maximus and hamstring play a crucial role in gait pattern. In occupation like bus drivers prolonged sitting delays gluteus maximus muscle activation leading to compensation of hip extension by hamstring muscles and causes overloading of hamstring muscles and leading to tightness (synergistic dominance). To address this issue, reeducating and strengthening the gluteus maximus can significantly improve hamstring flexibility.

METHODOLOGY: In this30 subjects were selected based on inclusion and exclusion criteria. Before giving intervention, subjects were assessed for hamstring muscle tightness and gluteus maximus weakness using sit and reach test, active knee extension test and manual muscle testing respectively.

RESULT: The result of the study demonstrate a statiscally significant improvement in reducing hamstring tightness, the findings indicate a significant increase in active knee extension test, sit and reach test, and manual muscle testing score p<0.01

CONCLUSION: This study highlights the effectiveness of gluteal muscle strengthening for 4 weeks on reducing the hamstring tightness and improving in hamstring flexibility for bus drivers.

KEYWORDS: Hamstring tightness, isometric test, synergistic dominance