

The effectiveness of seated combined extension-compression and transverse load traction in increasing cervical lordosis-challenging the underlying framework

ABSTRACT

Introduction: The goal of this study was to assess the effectiveness of seated combined extension-compression and transverse load (ECTL) traction as a new method for increasing a reduced lordosis of less than 30 degrees in a Malaysian population between the ages of 18 and 60 years. Possible changes in disc height were measured in accordance with the underlying theoretical framework, that suggests the anterior cervical structures would elongate due to creep over the fulcrum of the traction device. **Method:** This was a single centre, randomised, blinded controlled clinical trial with parallel groups, used to test the superiority of the seated combined ECTL traction together with physiotherapy exercises when compared with the same physiotherapy exercises used as a control. Fifty randomly allocated subjects who completed the forty treatments over the fourteen weeks were analysed using non-parametric tests for changes in outcomes. **Results:** There were no significant changes in outcomes for disc height changes seen in this study. The findings of a greater overall increase in posterior disc height changes compared with anterior disc height changes were in contrast with the proposed underlying theoretical framework for this type of ECTL traction. The greater height changes occurring in the control group were also unexpected. **Conclusion:** The findings in this study of the contrasting changes in disc height of greater posterior than anterior height changes, question the underlying theoretical framework as postulated for this type of traction.

Keyword: Extension compression and transverse load traction; Cervical lordosis; Disc height