

Effect of prior anterior superior iliac spine compression testing on second assessor findings: implications for inter-examiner reliability testing.

Kuchera ML, Casella F, Nelson J, Ferencz V, Myers NE.

Human Performance & Biomechanics Laboratory of the Department of Osteopathic Manipulative Medicine and Center for Chronic Disorders of Aging; Philadelphia College of Osteopathic Medicine, Philadelphia, PA, USA.

Abstract

BACKGROUND: Osteopathic physicians use palpation to diagnose sacroiliac joint somatic dysfunction (SD) -- including the Anterior Superior Iliac Spine (ASIS) Compression Test for dysfunctional side lateralization. (Literature suggests right-sided lateralization in 80% of asymptomatic individuals). Accurate, reliable tests are crucial however to diagnose SD and kappa (κ) analysis is a gold-standard to determine the degree of interexaminer reliability for tests. Few studies have examined the effect the palpatory examination has on subsequent diagnostic findings and therefore on κ -values.

METHODS: There were two phases to the study -- an agreement phase (to standardize exact performance and reporting criteria) and testing. Palpators (two DO/MS candidates) agreed to stand on the subject's right side and alternatively doubly-compress each side two times. After 80% protocol agreement was met, 330 healthy volunteers were recruited and evaluated in random succession. During testing each palpator was blinded to the other's reporting right-sided ASIS compression positivity or not. κ -values calculated for this study were based upon each examiner designating 10 definitely positive and 10 definitely negative right lateralization tests.

RESULTS: As first palpator, Examiner B diagnosed 79% right-lateralization (130/165) versus 67% for Examiner A (110/165), $p < 0.009$. Examiner A (first) compared to B revealed 72% versus 52% right lateralization, $p < 0.001$. κ -values for first palpator cohorts were moderate and fair respectively ($\kappa_A = 0.55$, $\kappa_B = 0.30$).

CONCLUSIONS: Right-sided lateralization preference mirrored the prevalence of 80% cited in the literature for first palpators but was significantly reduced when following another's palpation.