

Best Article of the Quarter (Q3) Summary

Reliability and validity of manual palpation for the assessment of patients with low back pain: A systematic and critical review.

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Chiropractic & Manual Therapies volume **29**, Article number: 33 (2021)

Static or motion manual palpation of the low back is commonly used to assess pain location and reproduction in low back pain (LBP) patients. This systematic review evaluated the reliability and validity of manual palpation used for assessing LBP patients.

We systematically searched five databases from 2000 to 2019 and identified 2023 eligible articles. We critically appraised the internal validity of relevant studies using QAREL and QUADAS-2 instruments and 14 were low risk of bias. We synthesized these 14 studies and classified validity studies according to Sackett and Haynes.

Eleven studies evaluated the reliability of static and motion palpation of joint and soft tissue. The evidence suggests that static soft tissue palpation may be reliably to identify gluteal tender points, sciatic nerve pain, and multifidus contraction but not lumbar paraspinal muscle pain. However, static joint palpation is not reliable in identifying pain and segmental mobility of the lumbar facet joints, lumbar spinous processes and SI joints, and location of spinal level contributing LBP symptoms.

Six studies evaluated validity of static joint, joint motion and soft tissue palpation. Gluteal muscle palpation for pain can differentiate LBP patients with or without radiculopathy (phase III study). We found preliminary evidence supporting the validity of the piriformis and lumbar paraspinal muscle palpation for pain (phase I study), spinous and sacroiliac joint palpation for pain (phase I study), sciatic nerve palpation for pain to identify mechanosensitivity of the sciatic nerve as determined by the straight leg raise and slump test (phase II study) and the multifidus lift test to help identify abnormal isometric contraction (phase II study). There was evidence against posterior to anterior palpation used to identify stiffness from L1-L5 spine levels (phase II study). Sacroiliac joint motion tests were not associated with sacroiliac pain provocation tests (phase II study).

In summary, the overall evidence is preliminary. Soft tissue palpation of the sciatic nerve, gluteal muscles for pain and the multifidus muscle for isometric contraction were reliable but have not been tested sufficiently for their validity for use in clinical practice. We only identified one phase III validity study evaluating gluteal muscle palpation of trigger points and taut bands. High quality phase III and IV validity studies are required to understand the diagnostic value of manual palpation tests in the assessment of adults with LBP. Clinicians must reconsider the usefulness of these tests when examining patients.