Reviewer's report

**Title:** Reliability and discriminant validity of cervicothoracic impairment measures in individuals with and without chronic neck pain

**Version:** 1  **Date:** 20 August 2012

**Reviewer:** Karen Walker-Bone

**Reviewer's report:**

The authors present a very detailed case-control study evaluating the inter-observer and intra-observer reliability of active cervical range of motion and strength and endurance testing. 20 people with neck pain and 20 without were evaluated and each person was evaluated by each observer on two occasions. Cases and controls were matched for age and gender.

A few comments:

- Most, but not all, tests performed showed reasonable inter- and intra-observer reliability. As currently presented, the summary statistics 'mask' whether there were any systematic differences between observers, i.e. whether one observer consistently found higher or lower results or whether there was an 'order' effect so that measures tended to increase at the second examination or decrease. The Table 2 could be re-done so that each observer's results are compared in order to make this transparent.

- It appears that the main finding is that all the strength and endurance measures and the active range of motion are significantly poorer in the patients with neck pain than those without. Can the authors justify a 30-minute examination to discriminate people with and without neck pain when they can simply ask them?

- If the aim is to create a reliable method of assessment of neck measurements that can be used to chart progress in response to treatment, would it not be better to correlate these measurements with PAIN levels and functional disability over time and demonstrate that they are performing reliably over time between two observers but also and perhaps more importantly that they are usefully correlating with reduced pain and/or increased functional capacity?

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

'I declare that I have no competing interests'