

Re: Clinical effectiveness of the activator adjusting instrument in the management of musculoskeletal disorders: a systematic review of the literature. JCCA 2012; 56(1):49–57.

To the Editor:

We read with great interest, the systematic review by Huggins et al.¹ in the previous issue of the JCCA. In their review, the authors conclude that there is benefit to the use of the Activator Adjusting Instrument (AAI) for patients with spinal pain and trigger points. Unfortunately, we feel that this conclusion holds little value to the reader, as the authors do not provide the context within which use of the AAI is beneficial. We assert that a clinical tool, such as the AAI, may not be of much benefit unless its action is directed with the correct clinical intent. As such, clinical outcomes could differ greatly depending on whether or not the AAI was used purely for instrument-assisted adjusting (i.e., the use of an activator to impart a chiropractic adjustment), or used as part of Activator Methods Chiropractic Technique (AMCT), a technique system that involves a group of specialized diagnostic procedures while assessing patient leg length in the prone position. The lack of context provided in their conclusion is surprising, as in their introduction, the authors do an excellent job of differentiating these notably different approaches to use of the AAI.

The authors correctly note in their introduction that it is difficult to make a distinction in the existing social-science literature between instrument-assisted adjusting and AMCT. In fact, they cite the 2005 National Board of Chiropractic Examiner's Job Analysis, which reported that 51% of American chiropractors have used 'activator', but which failed to distinguish the approach with which the 'activator' was used.² Furthermore, it has often been reported in peer-reviewed studies that over 1/3 of North American chiropractors use 'activator' on a regular basis^{3,4}, however, none of these studies made a distinction between use of an 'activator' for instrument-assisted adjusting vs. the use of AMCT. Although the authors of this review¹ have uncovered this flaw in the existing social-science literature, they too have neglected to adequately make this distinction in the conclusions of their own clinical-outcome-based systematic review. The authors mention both AAI and AMCT in their statement of objectives,

but then seem to present a discussion with regard only to instrument-assisted adjusting and a conclusion that presumably blends the outcomes from studies using these two diverse approaches. Eight clinical studies that used the AAI are included in their review, but the authors neglect to differentiate which investigated instrument-assisted adjusting vs. those that investigated AMCT. In fact, the authors do not differentiate in any way, their findings with respect to the clinical efficacy of AAI for AMCT vs. AAI for instrument-assisted adjusting. Thus, we ask, was any clinical research found that investigated the use of AAI with AMCT for the treatment of any condition? Or, does the existing research only support the use of the AAI as a tool for instrument-assisted adjusting, in the absence of AMCT protocols?

References

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To the Editor in reply:

Thank you for the opportunity to reply to the Letter to the Editor by Puhl and Reinhart. As we read it, the authors have two main areas of concern with respect to our article that reviewed the clinical effectiveness of the activator adjusting instrument (AAI).¹ These concerns can be distilled down to: (i) lack of discussion of the 'clinical intent' of the use of the AAI and; (ii) lack of discussion of the clinical effectiveness of Activator Methods Chiropractic Technique (AMCT) versus use of AAI.

With respect to the first issue, we assert the clinical intent of the practitioner was irrelevant. Nelson et al² have opined that what differentiates the chiropractic profession from other professions is that chiropractors focus on the beliefs or values of the practitioner; elsewhere, Coopers-tein and Gleberzon³ have suggested this is synonymous with differences in worldviews. Examples of differing clinical intents or worldviews include subluxation-based, functional-based, structural-based, pain-based, wellness-based and tonal-based. For the purposes of our study, however, the ideology of the practitioner was of no concern to us. This is because we were focusing on the clinical *effectiveness* of AAI treatments, not the purported 'philosophical' benefits envisioned by the operator.

It is possible that we misinterpreted this concern, and Puhl and Reinhart are referring to the determination of the clinical target by the practitioner. If so, perhaps a reiteration of our study's conclusion is in order. Of the 8 clinical trials we reviewed that met our inclusion criteria, the only clinical intent of the practitioners that concerned us was whether or not clinically meaningful results were achieved for various diagnosed conditions when either an AAI was used or when its use was compared to the use of another treatment method. The main outcomes measured by the investigators of these 8 clinical trials range from pain to range of motion to general disability. Overall, use of the AAI resulted in similarly beneficial results when used by itself or when compared to other therapies among patient with acute or chronic low back or sacro-iliac joint pain, dysfunction of the TMJ or trigger points of the trapezius muscle.

Moreover, it was not our concern if the practitioner used the AAI at the site of pain or if it was used at a site distant from it. Our concern was reviewing the literature with respect to clinical effectiveness achieved using the

AAI, regardless of how the clinical target was determined. This is not unlike many clinical trials investigating the effectiveness of interventions such as spinal manipulative therapy (SMT) for spinal pain. Typically, therapists in those kinds of studies are allowed to deliver SMT in whatever manner they choose (perhaps the only restriction is to have the patient positioned prone or side-lying) and the practitioner is often entitled to identify the site of care using whatever method they use in private practice (static palpation, motion palpation, joint play and so on). In these types of studies, the focus of investigation is the method of treatment for spinal pain, not how the site of care was determined nor the clinical intent the practitioner hoped to achieve by the intervention.

Along that train of thought, with respect to the concern that we did not differentiate the clinical effectiveness between AAI and AMCT, again we assert this was not necessary for the purpose our study. The purpose of the study was to review clinical trials that used the AAI. At times, these clinical trials were conducted by practitioners who substituted manual adjusting using the AAI and at other times the clinical trials were conducted by practitioners incorporating the diagnostic protocols of AMCT, which involve the isolation, stress and pressure tests to identify the putative 'pelvic deficient leg.'⁴ It was not our concern how the chiropractor identified the clinical target. It was our concern that they used the AAI as the method of treatment. It is for this reason we discussed that some of the clinical trials involved AMCT, since that is the only technique system that advocates the exclusive use of the AAI; however, AMCT, as a technique system, was not itself the focus of our study.

Looked at another way, our study concerned itself with the treatment side of the clinical encounter, not the diagnostic side. In order to accomplish this goal, it was necessary to search both the AAI and AMCT literature. Our study did not explore the validity or reliability of the diagnostic tests used by AMCT and it would have therefore been inappropriate – and gone beyond our dataset – to comment on them.

That said, we can inform Puhl and Reinhart that a study that assessed the reliability and validity of all diagnostic inputs used by chiropractors (including the diagnostic tests of AMCT) used to identify the site of care has recently been completed by a team of investigators. This manuscript is being prepared for journal submission and

one of the authors of that study (Gleberzon) anticipates publication of it by the end of 2012.

Respectfully submitted,

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