


Critical Analysis of “X-Ray Imaging Is Essential for Contemporary Chiropractic and Manual Therapy Spinal Rehabilitation: Radiography Increases Benefits and Reduces Risks” by Oakley et al

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The authors of this article use self-citation almost exclusively to substantiate statements inaccurately depicted as being representative of the general scientific literature. Three examples highlight this practice: (1) Imaging of the spine is an essential element of modern chiropractic and manual therapy; (2) Several clinical studies have demonstrated that spine rehabilitation programs, customized for the specific patients spinal misalignment, provide better patient outcomes versus traditional standardized approaches of the past (and present); and (3) Similarly, randomized clinical studies, on patients with lumbar spine hypolordosis (but not hyperlordosis) using extension traction methods to restore lordosis, have shown long-term relief from low-back pain. . . Each of these statements references the authors’ own work. Self-citation is not necessarily inappropriate but can be a surrogate marker of distortions of the scientific literature toward specific opinions and biases.¹

Second, the scientific literature is inconsistent regarding a causal association between alterations in spinal sagittal curvature and spinal pathology. A 2008 systematic review² concludes there is “no strong evidence for any association between sagittal spinal curves and any health outcome, including spinal pain.” A 2017 systematic review and meta-analysis concluded there was a strong relationship between low-back pain and decreased lumbar lordotic curvature,³ while a 2018 cross-sectional study⁴ determined no significant correlation existed between lumbar lordosis and pain levels for people with chronic low-back pain.

Lastly, the authors fail to discuss the significant problem of false-positive findings in spinal imaging studies, the result of which is overutilization of health-care services. A 2015 systematic review⁵ found that between 37% and 96% of asymptomatic individuals had disk degeneration, between 4% and 83% of asymptomatic patients had facet degeneration, and between 2% and 50% of asymptomatic patients had spondylolisthesis (increasing prevalence with age). Of 26 interventions classified

as “low value care,” imaging for nonspecific low-back pain was the most utilized, accounting for between \$82 million and \$226 million per year.⁶

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