Commentary: Subluxation: The Cause or Simply a Symptom?

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Chiropractors have long since condemned other health care providers for simply addressing ***symptoms*** rather than the ***cause*** of disease. This philosophical commentary considers this practice and suggests perhaps that this is also what chiropractors are doing when they continually adjust the chronic, recurring subluxation – rather than addressing the potential ***causes*** of the chronic, recurring subluxation.

Have you ever seriously asked yourself this question: ***"Why do we adjust?"*** Recently, I was unexpectedly asked this very same question, and as a result, was compelled to reflect on the answer. The question was posed during a recent visit back to the University of Oxford, where I am completing my DPhil (PhD). I had the opportunity to sit beside an eminent professor of evidence-based medicine at a departmental dinner. (Actually, it was the only seat available at the table when I arrived.) After ignoring me for most of the meal, during dessert he suddenly turned to me and asked the dreaded question. Then without missing a beat, he continued, *"So, do you think that chiropractic really works??"* Stunned at his ignorance, I struggled to know how to answer. Relentlessly he persisted with his assault: *"What are you going to do to try to convince me of its validity?!?"* Perhaps I should have been, but I was not expecting this interrogation over profiteroles and port wine. In typical Oxford style, his questions were direct and pointed, yet he had the right to pose them, as does anyone.

So, why do we adjust? Is it to alleviate pain? Is it to restore normal alignment of joints? Or proper biomechanics? Is it to remove nervous system interference? Or is it simply "to remove subluxations," as my first philosophy lecturer, the late, great Dr. Frank DiGiacomo, emphatically contended?

One cannot debate the reason chiropractors adjust without first addressing the subluxation conundrum. Whilst this paper is not a conjecture about the existence – *or not* – of "subluxation," the term and concept remain a bone of contention in our profession – between the pure "scientists" and the pure "philosophers." And I must say, there are good arguments in both camps. Gatterman[1,2] impressively argues the "for" outlining numerous studies supporting the model. Yet, Keating *et al.*[3] and Nelson[4] maintain that the simple Palmerian bone-out-of-place subluxation concept is archaic, and while not throwing it out completely, insist that the entire concept be rigorously trialled. Fair enough. Now since this is not a debate about the *existence* of subluxation – or not – for the sake of this commentary, the term "subluxation" will be used to mean "the target of many chiropractors' interventions."[3]

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Traditionally, chiropractors believed that ***all*** disease is a result of subluxation. Ironically, contrary to chiropractic's vitalistic ideals, this concept may be considered reductionistic in nature, in that it reduces deterioration of the marvellously complex human condition to one cause: ***subluxation***.[5] Is this not similar to the way allopathic physicians of yesteryear attributed all diseases of that time to one cause: ***germs***? I contend that perhaps in both cases, these are not causes, but merely ***effects***.[6] But how does one distinguish between ***cause*** and ***effect***?

Going back to the source, B.J. Palmer stated, "In the spinal column we *will* find a subluxation that corresponds to every type of disease."[7] In other words, B.J. Palmer believed that there is a *correlation* between subluxation and disease. However, *correlation* does not imply *causation*; that means, just because two conditions occur simultaneously does not mean that one causes the other. Alas, how does one prove causation? The gold-standard way to prove causation is thought to be through a carefully designed and meticulously executed randomised clinical trial (RCT).[8-11] Although there are few RCTs investigating the "subluxations cause disease" paradigm, there have been numerous animal studies where the spines of animals were purposefully "subluxated" or "fixated," and then subsequently changes in nerves, muscles and/or viscera were observed.[2,12-14] However, is this enough to prove causation? I knew it would not be enough for my eminent dinner guest. Whilst the quality of evidence in chiropractic is steadily improving, it is clear that many more robust trials are needed before we can confidently answer the causation question: ***Does subluxation cause disease?***

Before we consider these questions any further, let us consider something we do not do. Conventionally, we do ***not*** address symptoms, per se, but rather the ***cause*** of the symptoms, which many contend is subluxation. Yet, with disdain we criticise other types of practitioners for addressing symptoms, without addressing the ***cause*** of the symptoms. For instance, many of us even reprimand our patients for taking medications, such as pain-relievers, for we insist that this practice is simply covering up the symptom. Some of us use the good ol' *"oil light" analogy*. That is, when the oil light in the car comes on, that is a symptom, the cause of which is a low oil level. Taking pain-relievers is akin to removing the fuse so the oil light goes out. However, this does not address the ***cause*** of the condition (low oil) but rather removes the ***symptom*** (oil light on). The actual problem is still there (low oil). Moreover, if not addressed it may have potentially quite serious implications.

Certainly, if subluxations ***cause*** disease, then chiropractors who adjust the spine to remove subluxations are addressing the cause of disease. However, have you ever stopped to ponder about the ***causes of subluxation***? Especially just before you adjust a PI ilium – for the 12th visit in a row??

As most first year chiropractic students are taught, D.D. Palmer suggests that there are three causes of subluxation: (1) *Trauma*, (2) *Toxins*, and (3) *Autosuggestion* (or Thoughts).[15] Furthermore, in his book, The Neurodynamics of of the Vertebral Subluxation, A.E. Homewood[16] dedicated five entire chapters to the causes of subluxation: general causes, mechanical causes, chemical causes, mental causes, and a chapter explaining the variability of response. Also, chiropractic educator Dr. H.G. Beatty suggests that the cause of all disease is "irritation" – which was used to describe any stress on an organism.[16] Beatty suggests if the stress is sufficient to overcome the body's normal resistance, then structural distortions – or ***subluxations*** – can result. So, then theoretically the ***cause of subluxation*** is ***stress*** – physical, chemical, mental, or otherwise. Although I was intrigued, the scientist in me was not satisfied, and went in search of new and modern *evidence* of the ***causes of subluxation*** in the scientific literature. Sadly, I came up empty handed. In my Medline searches, whilst there were many studies on the ***effects*** of subluxation and the ***effects*** of chiropractic adjustments, I came up with no trials investigating the ***causes of subluxation.*** And very few studies in the chiropractic literature addressing the contribution of stress – physical, chemical, mental or otherwise – toward patients' conditions (including subluxation).

This lack of scientific support is problematic. In 2005, the World Federation of Chiropractic announced the unanimous acceptance of a new identity for chiropractic, which includes "to improve function in the neuromusculoskeletal system, and overall health, wellbeing and quality of life," and a "biopsychosocial approach, emphasizing the mind/body relationship in health."[17] How can we as a profession answer to this new charge if we are not also addressing the causes of subluxation – ***all*** causes of subluxation? If we rebuke other health professionals for not addressing the cause of disease, are we not equally culpable if we do not address in our patients the ***causes of subluxation?***

This is ***not*** to say that we should not adjust the spine. I am simply saying: *Do not continually adjust the chronically recurring subluxation without considering the* ***cause*** *of the chronically recurring subluxation!* Did the subluxation recur – with a resultant symptomatic torticollis – because of "just the way I slept" – as so many patients contend – time and again? Or maybe it is somehow related to the twelve cups of coffee they had the day before? Or even to the argument they had with their ex-wife last weekend? Needless to say their body is responding ***physiologically*** – by subluxating – as a result of some ***stress***. I believe it would remiss of us – as primary health care providers – to simply adjust and not to consider what the cause of that stress might be.

So, since this is a philosophical discussion, one then may ask: Are subluxations merely ***symptoms*** of some greater underlying ***cause***? Or are some subluxations symptoms and others causes? And if so, how is one to know which is a symptom and which is a cause? Ah, I fear this is sounding like a chicken-and-egg conundrum. ***Or is it??***

Perhaps one day there will be a sufficient body of evidence to settle this debate. However, in the meantime, perhaps for guidance we should revisit the Chiropractic Oath, a version of which most of us pledged upon graduating:

> *"... I will keep the physical, mental and spiritual needs of the sick as my foremost duty, ever searching for and correcting the cause of their disease to the best of my ability..."* [18]

So how did the story end regarding my distinguished neighbour at dinner? Did I ever get over the initial shock of his verbal inquisition? Was I was able to explain to him that perhaps chiropractic and allopathy came from differing paradigms? No, sadly, I did not get the chance, for just after he launched his assault, another dinner guest pressed him with an onslaught of questions about the recent epidemic of Swine Flu. However, next time, I will come prepared (and earlier to dinner).

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