

Side effects of the Chiropractic adjustment: And questions which arise

Otto J. Janke

Abstract: In this paper I draw from my clinical experience with patients reporting improvements in conditions beyond their presenting complaint following a course of care to resolve that complaint.

This raises the question of whether the Chiropractic adjustment is specific for one named condition, typically a musculoskeletal complaint reported in the literature, or whether that adjustment has side effects which beneficially impact other conditions being experienced by the patient but not reported on presentation?

Examples are presented relating to a range of 'other' clinical changes observed following chiropractic care, and I give the questions that these observations raise in my mind.

Indexing Terms: Chiropractic; research models; clinical questions; side-effects.

Introduction

Chiropractic has been enriched by research across diverse topics leading to improvements in treatment protocols for a wide-ranging list of named conditions. For most of the history of Chiropractic the research has leaned towards an allopathic method of the adjustment, often mislabelled as 'manipulation', and showing improvement to a single, named condition. More often than not this named condition is a vague musculoskeletal condition such as LBP or headache.

In this paper I took a purposive selection of published articles and asked the leading question

'Do these reported improvements happen only in this instance with this adjustment, or are all of these improvements occurring with all adjustments to some extent?'

In my practice it is not unusual for a patient to comment that a particular condition they had been experiencing has gotten better although that was not the chief reason that they came to our office. They may have initially contacted us for concerns about low back pain, only to tell us that their digestion, sleep, or even energy levels have improved after treatment. While appreciating that this is not a 'scientific' process, I have spoken with numbers of Chiropractors who have also had patients reporting improvement in health conditions well beyond their presenting complaint.

In the area of pharmacology a studied drug is expected to have one specific positive outcome which is then seen as a 'treatment' for a condition or symptom. However the drug prescribed for

... It is known that Chiropractors observe a variety of clinical changes reported by their patients after care for a presenting complaint, usually on musculoskeletal nature. Should our discipline be specifically examining these 'side effects'?



one outcome may have other outcomes even with proper prescription, dosage, and usage. These other effects of the drug are commonly called 'side effects'. But not all side effects are necessarily detrimental or bad. Many people think that the side effects of medication are necessarily bad. However, according to the *AMA Manual of Style*, a side effect is simply 'a secondary consequence of therapy (usually drug-based) that is implemented to correct a medical condition' and can thus be either beneficial or detrimental. (1)

My questions

Is it possible for Chiropractic be focused on one positive outcome yet also have other positive outcomes with the same patient with the same care given for a singular chief complaint? Are there positive side effects with Chiropractic adjustments that are not discussed with a patient? Should our communication of the numerous positive physiological, immunological, and cognitive effects of Chiropractic be better explained, elucidated, and marketed?

Examples from the literature

1. Starting with the 2007 *Journal of Human Hypertension* article by Bakris, et al in which Chiropractic care addressed '*anatomical abnormalities of the cervical spine at the level of the Atlas vertebra*'. This double-blind, placebo-controlled design tested a hypothesis that correcting the misalignment of the Atlas vertebra reduces and maintains a lower BP (blood pressure). The authors concluded that '*restoration of Atlas alignment is associated with marked and sustained reductions in BP similar to the use of two-drug combination therapy*'. This study had 50 patients.

The question that arises in this instance is:

'Does the blood pressure reduce and maintain with all Chiropractic adjustments, or only with those that have the atlas adjusted?'

2. In a 1994 study Selano, et al (5) '*sought to demonstrate that upper cervical specific adjustments would have a profound effect on the physiology, serology, and immunology of HIV positive individuals*'. The use of CD4 cells is important in that '*Measuring CD4+ T cells circulating in the blood provides valuable information about how well the immune system functions, especially in people with HIV*'. (6) If the CD4 cells are high in number, the immune system is better to fight HIV. If the numbers are low, then the body has a weaker immune response. Using a control group for comparison, the results showed the control group having a 7.96% decrease in CD4 cell counts, while the adjusted group showed a 48% increase.

In both studies the only area of the spine adjusted was the upper cervical area, typically C1, C2. My questions are:

'Could both of these results be happening in both of these studies? Could there be a decrease in blood pressure along with an increase in the CD4 cells when the upper cervical area is adjusted? Could this same effect happen when other areas of the spine are adjusted also?'

3. A study in which 157 children with developmental delay syndromes were measured with psychometric tests given by a certified speech therapist before and after receiving Chiropractic care. The children had wide ranging conditions such as dyspraxia, dyslexia, attention-deficit hyperactivity disorder, and learning disabilities. The article states '*Their ability to concentrate, maintain focus and attention, and control impulsivity and their performance at home and school improved*'. (2) Amongst children, could there also be a wide range of positive effects with Chiropractic care? The author of this study (8) showed the Chiropractors in the study had paediatric patients who complained of conditions such as

'skeletal, neurologic, gastrointestinal, infection, genitourinary, immune, and miscellaneous', although they were mainly skeletal and neurologic.

In these articles where Children were adjusted, could there be cognitive along with skeletal, neurological, gastrointestinal, infectious, genitourinary, and immune improvements all at the same time?

4. I will now consider the article by Masarsky and Todres-Masarsky, in which a small study of 10 patients ranging from ages 10 to 62 years of age had results suggesting *'short-term enhancement of creative thinking following a chiropractic adjustment'*. (4) This study can easily be overlooked for the patient size used, but the suggested results are still intriguing, nonetheless.

We often see cognitive improvements in patients, first in children, (20) the second across decades of age, especially with reduced falls-risk in the elderly. (21) My questions are:

'Can the Chiropractic adjustment improve cognitive function across generations?' In a time in the American sector where cognitive decline has a number of ICD10 codes as descriptors, should research be looking to non-pharmacologically change the vector of advancement of this condition?'

5. Kent reviewed articles on Chiropractic care correcting problems with vision. (7) The article echoes a statement previously read here that *'Many doctors of Chiropractic have encountered instances where the vision of a patient improved following chiropractic care'*. Although not a very commonly thought of reason to engage a Chiropractor for care, I ask

'can the vision of a patient also be improved if they initially entered the office of a Chiropractor for neck pain for instance?'

As Kent states *'... patients benefit on many levels which often have little to do with their musculoskeletal complaints'*.

6. Heart Rate Variability, *'commonly abbreviated as HRV, is an accurate, non-invasive measure of the autonomic nervous system (ANS), the body's main control system for self-regulation. HRV is widely considered the most comprehensive biomarker of health and fitness.'* (9) The use in Chiropractic has increased in the last decade. Janke showed improvement in HRV in a post breast cancer patient. (10) That article referenced four other articles by Zhang et al, (11) Haas and Russell, (12) Knowles et al, (13) and Hart, (14) in which dissimilar chiropractic techniques used by the researchers yielded improvements in HRV in all of the studies.

Heart Rate Variability has been shown to have a role in healthy aging (16), in healthy longevity (17), in exceptional longevity, (18) and even in improving the chances of survival of people 70 and older who were infected with COVID-19. (19) These benefits of a higher HRV demonstrate the potential need for people to find ways to increase theirs.

'Could being under Chiropractic care give patients an access to increase their HRV?'

7. When Doctors of Chiropractic were used as primary care physicians in an integrative medicine independent physician association (IPA), the authors showed *'70,274 member-months over a 7-year period demonstrated decreases of 60.2% in-hospital admissions, 59.0% hospital days, 62.0% outpatient surgeries and procedures, and 85% pharmaceutical costs when compared with conventional medicine IPA performance for the same health maintenance organisation product in the same geography and time frame'*. (18)

Even if the improvements were less, at say 50%, these results would still be extremely beneficial to a health care system burdened by expenses.

'Do these results occur with Chiropractic on a global scale? Are these decreases of in-hospital admissions, less hospital days, less outpatient surgeries, and less pharmaceutical costs a result of a combination of all the articles mentioned above? Should more people be under Chiropractic care regardless of symptoms, to decrease their overall health care costs?'

8. The '*side effects*' of Chiropractic may best summed up by Hannon (19) when reviewing the literature on the physiologic changes with Chiropractic in asymptomatic patients that '*... chiropractic adjustments, confer measurable health benefits to people regardless of the presence or absence of symptoms*'. He also goes on to state '*It is plausible that Chiropractic care may be of benefit to every function of the body and have the potential for long-term overall health benefit to those receiving chiropractic care*'.

Given the focus in allopathic (symptom) based research to have a single outcome from a single treatment, Chiropractic may not easily fit into this same style of research. Understanding that a study using all of the parameters shown above from the referenced articles would be nearly impossible to fully follow through. Therefore,

'is a new view of Chiropractic necessary? Instead of correlating the Chiropractic adjustment to one outcome, can we look at the totality of benefits of Chiropractic to the person as a whole?'

Conclusion

If we start to see this new model as feasible, then our communication of Chiropractic to our practice patients, to our communities, inter-professionally, and taught in the Chiropractic colleges should be expanded to allow this wholistic, and salutogenic view to be fully engaged and expanded upon.

Otto J Janke

DC

Private Practice of Chiropractic,

Cortland, NY

<https://www.jankechiropractic.com/>

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