

[IMAGE]

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Health, Subluxation, Adjustment: Semantic and Scientific Challenges Still Exist

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One way to validate chiropractic theory is to consider the concepts of health, subluxation and adjustment. Subluxation is related to health; health is related to adjustment; and adjustment is related to subluxation. Regarding the nature and direction of these relationships, we say that the greater the level of health of an individual, the fewer subluxations that person has. We also say that more (or better) adjustments lead to less subluxations, and furthermore, that more adjustments yield greater health.

While seemingly simple, these three concepts and their interlocking relationships provide an umbrella for a chiropractic research agenda, and pose a significant challenge to the profession. If pursued properly, many controversies and questions in the clinical practice of chiropractic can be answered, given sufficient resources and time. My point in discussing these controversial issues is to raise professional consciousness to get on with the task-not simply to criticize.

To research a relationship between concepts, they must be operationally defined to the point that there is a consensus about the exact procedures for measuring them. The importance of operational definitions cannot be overstated: without them, the scientific process simply cannot proceed.

Take "health" for example. We may think we know what health is, but how do we measure it? Is it optimum physiologic, mental and social well-being, or is it the lack of disease? As chiropractors, we believe that optimum well-being should be our clinical goal, but how do we know when our patients have arrived at this state? Can we ask them? Maybe. The SF-36 and similar multidimensional measures of health and quality of life to address this issue, but many chiropractors distrust their patients' opinions about their own bodies. They consider them too subjective. We should strive for objective measures, but regardless of the method, we can scientifically address the theoretical relationship between health and subluxation, if health can be measured in a valid and reliable way.

Having a standard measure of health would mean that epidemiological methods could be used to demonstrate that individuals with poor health suffer a much greater prevalence of subluxation, and conversely, that those in better health do not have much subluxation. Scientifically validating this relationship would do wonders. For one, chiropractic maintenance care would simply not be an issue.

However, this research challenge is confounded by the fact that the concept of subluxation also requires consensus on an operational definition. We do not have this, except in broad terms that lack measurement specificity. The definition by the Association of Chiropractic Colleges (ACC) is a good example of one that could be applied to virtually any pathology or dysfunction of joints, amenable to chiropractic adjustment or not. It reads: "A subluxation is a complex of functional and/or structural and/or pathological articular changes that compromise neural integrity and may influence organ system function and general health."

This broadness must be appreciated to understand why the term has created such confusion, not only in those looking into the profession, but also with our own practitioners. At one level it is possible and good to achieve political agreement, but at the deeper levels of description, measurement and explanation, agreement starts to deteriorate into defensiveness and polemics. I will undoubtedly be attacked just for bringing this up.

Simple semantic agreement is not the only issue, however, because the subluxation is said to be defined by a large group of specific anatomic and physiologic abnormalities. We spend a great deal of clinical time assessing abnormalities to diagnose subluxation, yet the crux of the operational definition problem is deciding exactly when (at what level or point) these physical "indicators" should be considered abnormal enough to constitute a subluxation.

This is not a trivial question, nor is it easy to answer. Most chiropractic technique systems are attempts to address this very problem. There may be some excellent models available, but overwhelmingly convincing data for any of them has yet to be published.

Perhaps the practical thing to start with is to establish a standard measure of health. A putative anatomic or physiologic attribute of a subluxation (an indicator) could then be validated when a specific level of that attribute is related to a (poorer) level of health. (A group of subluxation attributes can be tested, but the analysis is more complex.) To do research properly, a large group of individuals with varying levels of health must be recruited, and it must be shown that in healthier people, the subluxation indicator is either absent or reduced. If no difference in the level of subluxation indicator between healthy and unhealthy

people exists, another subluxation indicator should be tested.

The chiropractic adjustment is another concept in need of a better operational definition. Describing the **physical application** of an adjustment should be relatively straightforward using biomechanical methods. However, determining the **effect** of an adjustment is not possible without good operational definitions of subluxation or health. This presents a dilemma for definitions of adjustment that include an effect as part of the description.

For example, if an adjustment is defined by a beneficial change to joint structures and neurological function, then the mere description of a physical thrust is not enough. Some would divide the concept into two parts: spinal manipulation as the physical maneuver, and adjustment as the result or effect. In any case, understanding the relationship between adjustment, subluxation and health requires that all three concepts be operationally defined, and in a way that is practically possible to research.

In summary, research to understand the relationship between health, subluxation and adjustment requires that each concept be tested against (compared to) the others. The interlocking nature of the theory should be appreciated as a major research challenge. One cannot use a vague concept to test for the validity of another vague concept, so a great deal of work should be directed to developing valid and reliable measurements. Anyone who has ever attempted to do research to refine a measurement knows that it is painstaking, laborious and often unrewarding. Many small studies must be conducted, and each one must tightly controlled for error. Unfortunately, this kind of research is not exciting and does not usually lead to public relations opportunities.

If the goal of chiropractic care is to obtain health by reducing subluxation with adjustment, knowing when a subluxation is there (and when it is not) seems fairly important. No one can argue that everyone agrees on how this works at this point, but I do believe that science can settle it eventually. If the profession understands the value of this kind of research, it is more likely to be done. Please, financially support the college of your choice to engage in chiropractic research.

A more detailed discussion of the implications raised in this column can be found in my paper, "Concepts Germane to an Evidence-Based Application of Chiropractic Theory" (*Topics in Clinical Chiropractic* 2000;7:1).

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