Dynamic Chiropractic

PHILOSOPHY

# The Rationale and Scope of Chiropractic Research

Anthony Rosner, PhD, LLD [Hon.], LLC

One of the most gratifying and inspiring activities of recent times for me has been the opportunity to assess the state and potential of chiropractic research. I fear that the popular conception of individuals engaged in chiropractic research, not so long ago, was along the lines of Oscar Wilde's description of fox hunts: "the unspeakable in pursuit of the inedible." Here was an often incomprehensible goal being sought by individuals whose reputation was all but secure. In the hands of the most opinionated B.J. Palmers (whose hypotheses often appeared to approach the force of law), one could imagine that the primary reason experiments were done was, as facetiously suggested science writer Isaac Asimov, "to convince the idiots."

Yet one cannot deny the early milestones of chiropractic research: H.E. Crowe's description of whiplash as early as 1928;[1] description of the sacroiliac joint by Joseph Janse and Fred Illi;[2] Henri Gillet's development of motion palpation;[3] and Kirkaldy-Willis' and David Cassidy's low back pain clinical trial, one of the first publications in a medical journal to recognize a chiropractor as a coauthor.[4] Clearly empiricism had taken its rightful prominent place in guiding modern chiropractic research towards its primary objective: to establish a coherent body of knowledge within the profession.

A retrospective of the most recent investigations indicates that there is much to appreciate in chiropractic research, particularly in comparison with medical interventions, usually, but not exclusively, pertaining to low back pain. The superior effectiveness of chiropractic compared to to other medical modalities (bed rest, medication, physiotherapy, massage) has been demonstrated in the literature over the past six years.[5-7] More than 30 randomized clinical trials, a literature survey and appropriateness findings by the RAND Corporation, and three meta-analysis (the last having appeared in the Annals of Internal Medicine, October 1992),[8] have provided further validation. All these reports have been culminated by the findings of a panel of the Agency for Health Care Policy and Research in hearings conducted in September 1992, and in a report to be released early this year, that for low back pain intervention, chiropractic may have the most documented evidence of patient outcome of any of the available patient therapies. Emphatic support for this conclusion has recently been released in Pran Manga's comprehensive report funded by the Ontario Ministry of Health.[9] This is all the more remarkable in that David Eddy, a professor of Health Policy and Management at Duke University, has indicated that only 15 percent of medical interventions are supported by solid scientific evidence.[10]

Yet a basic flaw and a schism remain in chiropractic research, only very recently beginning to be addressed. In the vast majority of published research, the flaw can be identified: the precise chiropractic technique has not been described. No less than 97 distinct chiropractic techniques have recently been identified in the literature,[11] presents a formidable barrier to the individual seeking to replicate earlier published work. Fortunately, largely to the efforts of such groups as the

ACA Council on Chiropractic Technic and the Chiropractic Research Journal Editors' Council, more rigorously defined interventions are now beginning to appear in published research. In future research communications, it will be necessary to impose stricter guidelines to ensure that precise chiropractic methodologies are adequately described.

The schism arises from warnings from various sectors not to draw fire form the medical community by circulating reports of somatovisceral research, but rather to stick to one's knitting, concentrating on what chiropractors do best in the musculoskeletal arena. My response to this argument is that research must not be confused with education. The most documented chiropractic research in the musculoskeletal field is clearly an issue to broadcast far and wide, not only in chiropractic college curricula, but in the medical schools as well. An increasingly large number of case reports addressed to various somatovisceral areas is linking up with a persistent and fundamental observation by the neurologists, who conclude from some of their basic research that adjustments work because they normalize neuroplastic processes which are maladaptive. Such is to suggest that the nervous system, the centerpiece of chiropractic theory, may play a role in the functioning of the viscera. A maladaptive nervous system would therefore be expected to be reflected by maladaptive viscera.

Furthermore, there are compelling logical conclusions that underlie certain somatovisceral interventions, added to very real shortcomings found in established medical treatments. A prime example is otitis media. The rationale for chiropractic therapy is to effect drainage of the eustachian tubes. Such an approach becomes all the more reasonable and desirable in light of the following facts: (i) 40 percent of all otitis media cases are the result of sterile effusions and are therefore unresponsive to antibiotics commonly applied in medical treatment;[12,13] (ii) antibiotics can have harmful side effects; (iii) increased antibiotic resistance following the use of antibiotics may account at least partly for the increased prevalence of otitis media within the past 10 years;[14] and (iv) 40 percent of the cases of the insertion of tympanostomy tubes (commonly done in medical interventions) have resulted in permanent structural damage to the tympanic membrane.[15]

In addition to supporting retrospective and prospective case studies in otitis media, FCER is funding clinical trials addressed to patient complaints in at least four domains other than low back pain. These areas include migraine headaches, dysmenorrhea, carpal tunnel syndrome, and infantile colic. As with otitis media, the latter four conditions have revealed deficiencies in the medical interventions employed thus far, giving further rise to the plausibility of exploring other modalities of treatment, including chiropractic care.

It has to be understood that the entire spectrum of research methodologies must be embraced to build the future knowledge base of chiropractic or any health profession. Not only randomized clinical trials, but prospective, retrospective, and single case studies must add to the mix of research efforts. The most elaborate and publicized multi-site, blinded, crossover and placebo-controlled randomized clinical trials all had their beginnings with "lowly" case studies. So the research objectives of the profession within the next few years are necessarily predicated on the observations gleaned from every clinician's office. It is FCER's mission to reach out to these locales and provide as much guidance as possible in structuring and funding the work of practitioners which is deemed promising and within scientific guidelines. We would only expect that sound rationales and complete literature reviews be included in the research proposals submitted to us.

Finally in considering the rational for somatovisceral research, one has to appreciate the big picture. This year is bearing witness to the first nationwide comprehensive attempt to overhaul the delivery of health care services in America since the Great Depression. Central to this discussion is the issue of primary care: the first point of contact of patient and health care provider, ultimately

determining the course of therapy, referrals, health restoration and/or maintenance, and costs associated with the entire set of treatments. Each somatovisceral condition that is unequivocally found to be amenable to chiropractic therapy becomes a supporting pillar for the profession to engage in the primary care of patients. The issue of primary care extends far beyond the scope of this article. Suffice it to say that it will gain considerable credibility within the chiropractic community as six lines of investigation are woven together in chiropractic research:

- musculoskeletal outcomes research
- somatovisceral outcomes research
- cost-effectiveness analysis
- biomechanics
- basic research
- verification of instruments and data processing techniques

These areas form the nucleus of the research objectives and scope of interest at FCER.

*References*


1. Foreman SM, Croft A. Whiplash Injuries, the Cervical Acceleration/Deceleration Syndrome. Baltimore: Williams & Wilkins, 1988.

2. Illi FWH. The Sacro-Iliac Mechanism: Keystone of Body Balance and Body Locomotion. Chicago. National College of Chiropractic, 1940.

3. Gillet H. The history of motion palpation. European Journal of Chiropractic 1983; 31:196-201.

4. Kirkaldy-Willis WH, Cassidy JD. Spinal manipulation in the treatment of low back pain. Canadian Family Physician 1985;31:535-540.

5. Waagen GN, Haldeman S, Cook G, Lopez D, DeBoer KF. Short-term trial of chiropractic adjustments for the relief of chronic low back pain. Manual Medicine 1986;2:63-67.

6. Meade TW, Dyer S, Browne W, Townsend J, Frank AO. Low back pain of mechanical origin: randomized comparison of chiropractic and hospital outpatient treatment. British Medical Journal 1990;300:1431-1437.

7. Koes BW, Bouter LM, van Mamersen H, Essers AHM, Verstegen GMJR, Hofhuizen DM, Houzben JP, Knipschild PG. Randomised clinical trial of manipulative therapy and physiotherapy for persistent back and neck complaints. Results of one year follow up. British Medical Journal 1992;304:601-605.

8. Shekelle PG, Adams AH, Chassin MR, Hurwitz EL, Brook RH. Spinal manipulation for low-back pain. Annals of Internal Medicine 1992;117:590-598.

9. Manga P, Angus D, Papadopoulos C, Swan W. The Effectiveness and Cost-effectiveness of Chiropractic Management of Low-Back Pain. Richmond Hill, Kenilwork, 1983.

10. Smith R. Where is the wisdom: The poverty of medical evidence. British Medical Journal 1991;303:798-799.

11. Bergmann TF. Various forms of chiropractic technique. Chiropractic Technique 1993;5:53-55.

12. Bluestone CD, Kenna MA. Chronic supportive otitis media: antimicrobial therapy with effusion. Pediatric Annals 1988;13:417-421.

13. Prellner KI, Hallbert T, Lamo O, Munsson B. Recurrent otitis media. International Journal of Pediatrics 1985;9:219-225.

14. Behrman R, Vaughan V. Nelson Textbook of Pediatrics, ed 13. Philadelphia, WB Saunders Co., 1987.

15. Stangerup SE, Tos M. Etiologic role of suppurative otitis media in children. American Journal of Otolaryngology 1985;6:126-131.

*Anthony Rosner, PhD*
*FCER Director of Research*
*Arlington, Virginia*

JANUARY 1994