Research in the Chiropractic Profession

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Importance of research

This article is written in the interest of every chiropractor who is concerned about the direction that the chiropractic profession is to take. If we, as a profession, don't make an attempt to define and explain chiropractic phenomena, someone else will. The control of the field of spinal manipulative therapy (S.M.T.) will eventually belong to the group that researches it, not the group that propounds it or has had a long history of practicing it. It is that simple and that important.

The aim of research is to determine whether a hypothesis is correct, or incorrect. Research in the chiropractic profession is important as it will allow us to determine whether or not the conclusions that have been drawn from clinical experience are valid or invalid, what chiropractic techniques are most effective or ineffective, and in what circumstances or conditions they are effective or ineffective. Research will allow the chiropractic professional to diagnose and treat with more precision and benefit to patients, instead of diagnosis by trial of therapy. Research is absolutely vital to the advancement and acceptance of our profession in the mainstream academic community.

Research is also an important asset to public relations for any profession. Research will inevitably lead to a justified increase in public awareness, and a larger portion of the public seeking chiropractic care. Ultimately, research will guarantee autonomy, self-regulation for our profession, speed university affiliation, and win government funding. At this point in time, there is *nothing* more important to the chiropractic profession than research.

Questions to be answered[1]

We have many questions to answer, some of which are:

- What are the research priorities for the chiropractic profession?
- How do we implement these priorities?
- What are the sources of funds for chiropractic research?
- What is a chiropractic subluxation, manipulable lesion, or biomechanical fault?
- What is a chiropractic adjustment/manipulation? What does it accomplish directly/indirectly, in terms of physiology, neurophysiology and biomechanics? Less than 10% of chiropractic patients are treated solely for visceral symptoms; how much emphasis do we place on research into manipulative visceral physiology and neurophysiology versus manipulative biomechanics and somatic neurophysiology?
- What is unique about chiropractic? Should we capitalize on this uniqueness?
- Is there any benefit to the conservative management of musculoskeletal lesions?
- Should the public be more aware of, and take seriously, the effective conservative orthopedic treatment of musculoskeletal problems?
- Should the chiropractic profession concentrate on identifying and alleviating the biomechanical lesion, developing this as the chiropractic bailiwick? Or, should the chiropractic profession emphasize research of the treatment of visceral conditions with S.M.T., or only investigate the neurobiologic visceral phenomena associated with S.M.T., or ignore and avoid the treatment of visceral conditions with S.M.T.?
- Can chiropractors continue to state, with any justification, that the spine is the source of all disease?
- What effect does S.M.T. have on demonstrable visceral pathology?
- What role does S.M.T. play in visceral pathology, and can we predict this reproducibly and with confidence?
- What are the neurobiologic mechanisms by which visceral symptoms are alleviated with S.M.T.?

Do all visceral syndromes respond to S.M.T.? Do some?

- Are the cases of visceral syndromes which respond to S.M.T. typical or atypical? Does the condition improve or symptoms subside because of alleviation of concomitant musculoskeletal symptoms or from the return of proper nerve supply? Are the cases which respond caused in the main by somatoautonomic reflexes?
- What are the pain patterns associated with musculoskeletal lesions? What are the patterns of referred pain and radiculopathy?
- Is there a correlation between somatic lesions and visceral symptoms/pathology?
- Is there a correlation between visceral lesions and somatic symptoms/pathology?
- Should manipulation for visceral symptoms be undertaken in the absence of a subluxation?
- Can visceral pathology exist in the absence of a subluxation, and vice versa?
- What are the benefits (biomechanical, economic, and political) and detriments of the chiropractic holistic approach to health care?
- How much S.M.T. is too much?

Chiropractic research topics

In response to these questions, a list of topics currently under research, or requiring research, would include:

Somatoautonomic reflexes; manipulation in the presence of anomalies; conservative orthopedic management of subluxation, strain, sprain, contusion, periostitis, tendinitis, synovitis,

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bursitis, discal degeneration, myofascitis, extension facet syndrome, stenosis, neuralgia/neuritis, scoliosis, kyphosis, lordosis, acceleration/deceleration injuries, musculoskeletal pain syndromes, headache, migraine, costovertebral conditions, neurovascular compression syndromes and entrapment phenomena, sports injuries, work related injuries, coccygodynia, etc. What chain of events leads to pathophysiology and pathomechanics in wear and tear arthritides? Can we expand on the concept "dysfunction-instability-stability"?[2] What role has chiropractic to play in this process? Is this process inevitable? What is the role of E.M.G. and evoked potential testing in chiropractic (electrodiagnosis)?

- What are the biomechanics of daily activities, work related activities, sports and exercise? What are normal biomechanics?
- What role has S.M.T. in the post-accident rehabilitation of the musculoskeletal system?
- What is the relative effectiveness of different manipulative techniques (spinal and peripheral), ancillary therapeutics, electrotherapy, cryotherapy/thermotherapy or soft tissue techniques?
- How do different diagnostic techniques compare or correlate? For example, static palpation versus dynamic palpation versus radiographic findings?
- What are the sources of musculoskeletal pain, and what are the associated pain patterns?
- How do we define our terms? For example, subluxation, biomechanical fault, manipulable lesion, fixation, hypermobility, hypmobility, aberrant mobility, dysfunction, instability, stability, adjustment, manipulation?

In regard to chiropractic "accidents, incidents, reactions and indirect complications":[3] how do we recognize and avoid contraindications and potential hazards?

- What is posture?
- What is spinal health care?
- What are the identifiable factors in musculoskeletal health and disease?
- Where has S.M.T. no effect? Where is S.M.T. ineffective or less effective than conventional medical therapy?
- What role has the chiropractic profession to play in footwear, sleep products, biomechanical supports and orthotics and especially nutrition?
- What role has chiropractic to play in typical or atypical visceral disorders (enuresis, allergy, asthma, dysmenorrhea, G.I. and G.U. disorders, etc)?
- What are the sociological and educational aspects of the chiropractic profession?

Research funds – the history and function of the Chiropractic Foundation for Spinal Research

Take heart. The chiropractic profession is a research frontier. Once viewed with disdain by the nucleus of the academic community, the field of chiropractic research is now being viewed as an attractive and vast expanse, with great potential for prestigious discovery.

Our cause is being undertaken by those we need most – researchers. Research in any field of endeavor is a costly undertaking; chiropractic research is no exception. The paucity of published clinical trials and basic science research is the greatest impediment to academic and public acceptance of the chiropractic profession[4,5], and justifiably so. Unproven clinical hypotheses, anecdotes and testimonials are inadmissable evidence in the high court of academia.

To the present, the lion's share of funding for research in the profession has come from assessment of and donations from within the membership of the chiropractic profession. We have not received any sizeable granting from any government body. As a profession, we are compelled and committed to research the effectiveness of S.M.T., but denied the resources to accomplish this end. Is this just?[6]

The chiropractic profession, chiropractic supply companies, and the patients of chiropractors will, by necessity, have to continue to be the main source of funding until a solid foundation of creditable research and researchers at accredited institutions has been established. Then, by their own excellence and tenure, these researchers will be in a position to successfully apply for government funding.

In 1974, the Canadian Chiropractic Association was approached by the Manitoba Chiropractor's Association with a proposal to establish a charitable research foundation to meet the immediate and long-term needs of the chiropractic researcher. In 1978, the Chiropractic Foundation for Spinal Research was incorporated by the Canadian Federal Department of Consumer and Corporate Affairs as a registered charitable organization. All membership fees, donations, and bequests to the Chiropractic Foundation for Spinal Research (CFSR) are tax deductible. The CFSR is the only federally registered charitable organization in Canada whose raison d'etre is to support chiropractic research.

The CFSR is independent of all federal and provincial chiropractic associations, as well as chiropractic colleges. The mandate of the CFSR is to collect and disburse funds to promote research into manipulative, biomechanical, kinesthetic and arthrological studies of the spine and appendicular structures, as well as manipulative physiology, neurophysiology, and chiropractic education.

The structure of the Foundation is as follows: the Board of Directors is composed of one appointed member from each provincial chiropractic association, and the seven members of the Board of Governors. The Board of Governors (composed of five chiropractors, a solicitor and accountant) executes the day-to-day operations of the Foundation. An Advisory Board, operating at arm's length, studies and makes recommendations on all research applications.

The Foundation supports chiropractic research in several ways through:

a) research grants (research projects, paper presentations),
b) formulation grants (seed money), and
c) research awards (fellowships and bursaries).

The CCA encourages the members of the chiropractic profession in Canada to support the Chiropractic Foundation for Spinal Research. Ultimately, federal and provincial sources will be availed for funding, as will the support of accredited universities and other institutions. Until such time as this occurs, however, by necessity the registered charitable organization of priority for each and every chiropractor who shares these concerns must be the one that supports research in your profession.

What are the research priorities for the chiropractic profession?

The 1984 Conservative Health Science Research Conference held in Houston, Texas, and jointly sponsored by the Foundation for Chiropractic Education and Research (the chiropractic research foundation chartered by the American Chiropractic Association), and the Texas Chiropractic College, identified the following short list of chiropractic research priorities:[7]

a) Identification of the chiropractic paradigm or model (the hypothetical goal researchers set out to prove or disprove),
b) Identification of the chiropractic scope of practice,
c) Clinical trials,
d) Basic science research, and
e) Clinical case reporting.

How do we implement these priorities?

Our approach must be bidirectional. We must encourage, and support financially, appropriate basic science research of full-time doctorate (Ph.D.) and undergraduate researchers (especially chiropractors in pre-Ph.D. studies), who have fields of endeavor related to the chiropractic profession (e.g. biomechanics, kinesiology, physiology, neurophysiology, manipulative physiology, statistics and sociology). We must, as well, encourage and support the clinical trials of clinical science researchers within the chiropractic profession.

The undertaking of basic science research will endow us with the building blocks for academic growth. Clinical trials will investigate the relative effectiveness of treatment practices currently in use, studies which are directly related to day-to-day chiropractic practice.

What is currently going on in chiropractic research?

A review of the latest literature in the journals available to the chiropractic professional and researcher (eg. JCCA, JMPT, ACAJ, CRAC)[8] will certainly keep those of us in private practice up-to-date. We must, as well, however, be aware of the research that has not yet been published, or that which is underway.

Every chiropractic college in North America has a research department, and most have exciting research programs. Several universities and colleges in Canada and the U.S. are the sites of ongoing cooperation between the chiropractic profession and other related disciplines. For up-to-date information, contact your alma mater.

Scientific Research Paper Presentations (such as the annual Chiropractic Research Commission International Conference on Conservative Health Science Research, or the jointly sponsored CFSR/CMCC Alumni of B.C. Back Pain Conference) provide a showcase for the latest research. These paper presentations offer an opportunity for the chiropractic practitioner to see first-hand the cutting edge in research. Attend paper presentations, if at all possible; obtain and read the published proceedings of these paper presentations.

How can I participate in research in my profession?

Most of us in private practice are not equipped with the necessary credentials, equipment, or expertise to carry out basic science research or clinical trials, nor do we have the time to do so. All of us in private practice can, however, participate in research through clinical case reporting. All that is required is the time to write about a typical or interesting clinical case, and submit it to one of the chiropractic journals or case reports publications. Clinical case reporting is an integral part of research in any profession. It is absolutely necessary that we have published documentation of what occurs day to day in our offices.

The Chiropractic Foundation for Spinal Research exists solely to collect and disburse funds for chiropractic research. Financial support of the CFSR, by the Canadian chiropractor, is on a voluntary basis; it is not mandatory. But without your support, there is little that we, as a Foundation, can accomplish. Your monetary support of the Foundation assures your involvement in research. The financial support of the CFSR by chiropractic patients, the general public, chiropractic service companies, and the corporate sector is also required and encouraged. Tasteful and attractive CFSR pamphlets and pamphlet holders (in English and French) are available to every chiropractor for office display, and at no charge. The chiropractic associations in the provinces of B.C., Alberta, Saskatchewan, and Manitoba have shown leadership in funding chiropractic research through annual membership assessments ($10, $100, $100, and $50 per member respectively). British Columbia, Saskatchewan and Manitoba direct their assessment to the CFSR. Alberta utilizes its assessment in-province. Members of the chiropractic

Table 1

Province	Average Contribution per Member to CFSR	
	1983	1984
B.C.	$12.39	$29.45
*Alberta	2.03	1.46
Saskatchewan	9.41	20.78
Manitoba	78.84	69.83
Ontario	6.78	5.00
Quebec	.63	.94
Maritimes	1.82	1.82

*Alberta figures do not include the kept-in-province assessment.

profession can become members in the CFSR by making an annual $100 tax deductible contribution to the CFSR. Table 1 illustrates the provincial research contribution per member made to the CFSR for 1983 and 1984.

Conclusion

Let us not be afraid to usher chiropractic into the forefront, and a new era, with a profession based on researched and proven models and conclusions. Through research we will determine how, why, and what spinal manipulative therapy accomplishes, and why clinical chiropractic has been so successful. We must identify our scope of practice. Through research we will jettison those unacceptable and wrong-proven practices within our profession. We must do this before the allied health professions that have lately embraced S.M.T. syphon off all that is effective, and leave us with a hollow shell of redundant or useless treatment practices, half-truths and ineffective measures. Let us clean our own house before it is done for us, at the cost of losing our mandate, autonomy and reason for being a profession. The hallmark of any profession is to prevent what it treats. Research will identify effective, preventative measures for musculoskeletal syndromes and pathology.

The chiropractic profession has survived despite vigorous opposition. Without chiropractic research funded from within the profession, spinal manipulative therapy may survive without the chiropractor. Please support the Chiropractic Foundation for Spinal Research.

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