

VERTEBRAL SUBLUXATION RESEARCH: THE DEVELOPMENT OF A RESEARCH AGENDA FOR THE AUSTRALIAN SPINAL RESEARCH FOUNDATION

Spinal Research Foundation

Introduction

The concept of vertebral subluxation has been central to the chiropractic profession for well over 100 years, and is the basis for the profession's identity. (1, 2, 3) Despite significant debate, vertebral subluxation remains relevant to the practice of chiropractic (4, 5, 6, 7) and chiropractic education, (8, 9, 10, 11) is documented in scope of practice policy and legislation, (1, 3) and though there is strong supporting scientific evidence it is a high priority for future research. (12, 13, 14)

The theory of the vertebral subluxation, and the potential impact it may have on human function and health, has been widely described and accepted within the greater healthcare community. (3, 15, 16) However, within the chiropractic profession there has been a clear need to properly investigate vertebral subluxation and its effects on human function. (12, 13, 17)

The chiropractic profession is uniquely positioned to address the possible impact that interference to the nervous system has on the expression of life. (1)

The *Australian Spinal Research Foundation* (the Foundation) recognises the following principles that are central to chiropractic:

- ▶ That a person's state-of-being, or how well they are expressing life, is dependent on their ability to be self-aware, to self-regulate, organise and heal;
- ▶ That the person's nervous system is central to the perception of, processing of, regulation of and adaption to environmental demand;
- ▶ That vertebral subluxations may interfere with the expression of life, which impacts the person's ability to be at their optimal state-of-being; and

... The Foundation recognises the importance of creating a research agenda that is congruent with the traditional principles of chiropractic to further investigate the vertebral subluxation and its potential effects on human function'

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- ▶ That to improve a person's state-of-being, it is vital to address the vertebral subluxation as a cause of their reduced state-of-being, rather than exclusively investigating the effect(s) / symptoms.

The Foundation recognises the importance of creating a research agenda that is congruent with the traditional principles of chiropractic to further investigate the vertebral subluxation and its potential effects on human function. The chiropractic profession is the only profession to specifically assess and adjust the vertebral subluxation, our unique contribution to health care should be thoroughly investigated.

To this end, in February 2017 the Foundation's Board announced its three-part strategic plan for the next 5 years to step closer to its vision of "*A clear understanding of subluxation*", and support their mission "*to facilitate research that furthers the understanding and development of chiropractic care.*" The board committed to facilitate one million dollars of funded research toward reaching that goal. This assertive move demanded that the Foundation engage thought leaders within the chiropractic profession in an extensive consultation process. The consultation resulted in the development of the research agenda that will be the directive for research over the next 5 years.

Research Agenda Consultation Process and Results

In late 2016, a 9-month collaborative, global consultation process was undertaken by the board of the Foundation. This process engaged 59 leaders, researchers and academics from the chiropractic profession from 9 countries (Australia, Canada, England, Germany, Hong Kong, New Zealand, Scotland, Spain and the United States of America). A total of 15 full-time researchers were represented in the consultation group. The consultation group represented 11 colleges, 5 national associations, 3 research foundations, 4 peer-reviewed research journals and 5 allied organisations.

The consultation process involved one-on-one communication, a group wide survey and two 'round table' style meetings held in Melbourne (Australia) and San Francisco (USA) in April 2017. Based on the information gathered through this process there are several findings that have supported the development of the Foundations research agenda and a conceptual definition of vertebral subluxation.

The research agenda focuses five core areas of interest that support a better understanding the impact of chiropractic care on the quality of life of an individual and on the community. The first area of interest, part one, was the development of a conceptual model of vertebral subluxation. Parts two to five focus on the clinical identification and impact of vertebral subluxation in the human population.

Research agenda – Part 1 (Conceptual definition of vertebral subluxation)

In consulting the profession's thought-leaders, the Foundation was advised that past definitions of vertebral subluxation are not suitable because they either:

- a) do not allow for a testable model of the vertebral subluxation; and / or
- b) the science that they reflect is no-longer current; and / or
- c) they are not translatable to practice.

To best develop a conceptual definition of vertebral subluxation, the Foundation was advised that the definition should be philosophically congruent, scientifically testable, relevant to practice, and reflect the impact that vertebral subluxation may have on human function and state of being. The Foundation was strongly advised to not develop an operational definition, to include the holistic impact of vertebral subluxation and its implications on the vitalistic nature of a person.

As a result of this consultation process the board of the Foundation have formulated and adopted a conceptual definition of vertebral subluxation that is applicable to research and chiropractic practice. (18) This reflects the current available evidence and understanding of vertebral subluxation.

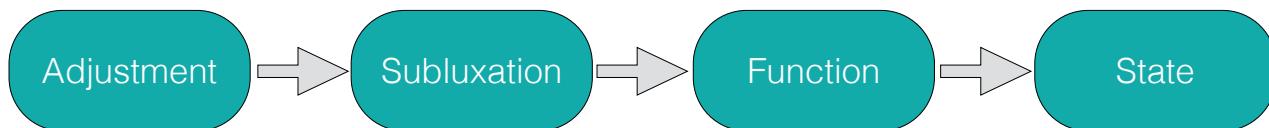
For the purpose of this research agenda the *Australian Spinal Research Foundation*, currently defines that:

'A vertebral subluxation is a diminished state of being, comprising of a state of reduced coherence, altered biomechanical function, altered neurological function and altered adaptability.' (June, 2017)

Research agenda – Parts 2 to 5

In consulting with the thought leaders in the consultation group the Foundation was advised that it would be incomplete to have an agenda that solely focused on the vertebral subluxation. The Foundation was strongly advised to include the Adjustment as part of the research agenda, and that this would be highly impactful and congruent.

It was strongly advised, and considered to be potentially highly impactful, that a testable model that incorporates vertebral subluxation should be developed to reflect current available evidence and understanding, and one that is derived from chiropractic philosophy. The model should allow for the testing of this concept. In simplistic terms, it should encompass the following simplified linear causative chain:



The four-element causative chain identifies three variables; an independent variable (Adjustment), an outcome variable (State), and two mediating variables (Subluxation and Function). From these, three assertions can be made; that Adjustment impacts Subluxation, that Subluxation impacts Function and that Function impacts State.

Ultimately an implicit statement can be assumed that Adjustment impacts State. It is advised that research facilitated by the Foundation should:

- ▶ Operationalise the elements
- ▶ Measure the elements
- ▶ Investigate the causal assertions

In further developing the research agenda the Foundation was strongly advised that it should be aimed at improving the understanding of the phenomenon of life, supporting the creation of a new model to investigate this phenomenon that is not allopathic, and support the understanding of the model of the system that researches the vitalistic nature of the system

The Foundation was strongly advised that our unique services are to create more of the right Research:

1. Through coordinating a common research agenda:
 - i. by becoming the focal point coordinating a vital, common research agenda internationally
 - ii. by emerging as the needed leader to guide and collaborate research efforts
2. Through collaborated research output:

- i. by continuing the deductive process of creating research; explore the utility of the paradigm
- ii. by exploring specific opportunities

Following the extensive consultation process the *Australian Spinal Research Foundation* has developed, adopted and is committed to facilitating the required funding to implement the research agenda. By 2022 the *Australian Spinal Research Foundation* aims to engage researchers to investigate the impact of chiropractic care on the quality of life of an individual and on their community through a deeper understanding of the:

- ▶ Reliability, validity and reproducibility of vertebral subluxation measures of identification,
- ▶ Impact of a vertebral subluxation and an adjustment,
- ▶ Epidemiology of the vertebral subluxation, and
- ▶ Impact of the vertebral subluxation and the adjustment on the community

The Australian Spinal Research Foundation Research Agenda

By 2022: Investigate the impact of Chiropractic care on the quality of life of an individual and on their community.

1. Develop a conceptual definition of a vertebral subluxation (usable in research and translatable to practice)
2. Investigate reliability, validity and reproducibility of vertebral subluxation measures of identification (can vertebral subluxations be measured using reliable and valid indicators?)
3. Investigate the impact of a vertebral subluxation and an adjustment (what impact does vertebral subluxation and the adjustment have on nerve system and human function?)
4. Investigate the epidemiology of the vertebral subluxation (who is subluxated and what effect does this have on their quality of life?)
5. Investigate the impact of the vertebral subluxation and the adjustment on the community (does vertebral subluxation focused chiropractic care improve health outcomes of a community?)

(Adopted June, 2017)

To support the implementation of the research agenda, the *Australian Spinal Research Foundation* will:

- ▶ Engage industry researchers to submit expressions of interest to complete projects targeted at investigating the research agenda areas of interest and assess these projects through our robust preliminary peer-review process;
- ▶ Engage vertebral subluxation focused and additional chiropractic groups, organisations, associations, allied companies, chiropractors and those who have benefited from chiropractic care to co-fund approved research projects; and

- ▶ Promote the results of the completed research projects to the wider chiropractic profession and its organisations, policy makers and legislators and the general public through an ongoing promotional campaign.

Since its inception in 1977, the Foundation has funded and facilitated funding for well over 200 basic science and clinically relevant research projects. The development of this consultative research agenda has sharpened funding priorities to areas relevant to the profession and brings closer our mission to facilitate one million dollars of funded research. The board is committed to continue to refine the foundations funding priorities congruent with its research agenda and adopt to the changing needs of the profession.

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