

Update 4

The International Chiropractors Association and the Foundation for the Advancement of Chiropractic Tenets and Science held its second International Symposium on the Philosophy, Art and Science of Chiropractic in Rome, April 5-7, 2002. The following is my brief summary of a research paper, that might best be described as a pretest/post-test case design, presented during that symposium by Dr. Jon Cory BS, DC, DACNB. (The full paper can be found on pages 17-22 in the proceedings from that symposium).

Hearing Improvement Following Chiropractic Care Jon Cory, BS, DC, DACNB

Introduction: Since its beginning, chiropractic has been linked many times to the restoration of hearing. This study was undertaken to explore the global aspects of chiropractic and the improvement of audition through chiropractic adjustment of structures other than the cervical spine.

Materials/ Methods: A total of 15 patients (mean age 54.3) participated in this study from patients presenting at a chiropractic office. Audiometric screening was performed on patients (Using a Welch Allyn Audioscope 3) regardless of complaint, before and after their first chiropractic adjustment.

Results: All patients in this study showed improvement of some aspect of the audiometric tests performed. The average score improved after treatment (right average pre = 5.7; post = 9.9; left average pre = 8.2; post = 10.2). The authors report that this difference was statistically significant ($p < 0.02$ on both sides; Wilcoxon's signed rank test).

Discussion: The author contends that, "The art of chiropractic lies in the ability of the care to be structured to the individual needs of each patient. For that reason, there was no "specific" adjustment given to restore hearing".

Conclusion: The author concludes that this was the first study showing improved hearing following chiropractic adjustment of structures other than the cervical spine.

ASRF Chiropractic Editor's comments: This simple study is the first to examine whether chiropractic adjustments, directed towards areas of the body other than the cervical spine, might influence hearing in chiropractic patients with normal hearing.

The results suggest that hearing might provide us with a window through which to further explore the effect of chiropractic adjustments on the nervous system. Despite the apparent positive results, the study design sits quite low in a hierarchy of evidence and as a result, any conclusions we attempt to make must be done so tentatively.

A pre-test/post-test design like that used by Dr. Cory in the above paper is only slightly less susceptible to bias than a case study or a case series. For example, taking the pre-test measurement on only one occasion is of limited help in terms of distinguishing between level, trend and variability in the data. Measurement error and variability in the testing apparatus are two other sources of bias that were not discussed by the author. During the course of the paper the author does mention that all measurements were made by the author and that he also provided the care. Therefore data collection and analysis were not blinded -- this is another potential source of bias.

Dr. Cory deserves to be applauded for attempting to explore a hypothesis that is of interest to the chiropractic profession on political, clinical, scientific and historical levels. If there is one conclusion that we can make with confidence based on Dr. Cory's paper, it is that despite his paper's shortcomings, this line of research deserves further attention.