The Effect of a Chiropractic Adjustment on Sensorineural Hearing Loss

A dissertation submitted to the

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Master’s degree in Technology
In the programme Chiropractic
by

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DECLARATION

I declare that this dissertation is my own, unaided work. It is being submitted for the Degree of Master of Technology in Chiropractic at the University of Johannesburg. It has not been submitted before any degree or examination in any other Tertiary Institute.

___________________
(Signature of Candidate)

On this____ day of _____________________
DEDICATION

To my parents, thank you for your continuous love and support throughout the many years of studying, although not often said, it’s greatly appreciated.

To Angie, my wife and best friend, you have supported me through some incredibly difficult times in the past. Without your love, support and friendship, I would not have made it this far.

To my Father, thank you for your guidance and willingness to help me always. You have inspired me to be the best I can be.
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ABSTRACT

The first documented case of improved hearing following chiropractic adjustment was by D.D. Palmer in 1895 in which he restored Harvey Lillard’s hearing. Mr Lillard had been deaf for seventeen years. This brought about the birth of a new profession called chiropractic (Terrett 2002).

It has been postulated that dysfunction or spinal joint motion restrictions of the cervical spine may lead to irritation of the sympathetic nervous system which may cause decreased blood flow to the auditory nerve via the labyrinthine artery (also known as the internal acoustic artery or internal auditory artery), which in turn may lead to a decrease in hearing acuity (Hawley 1964).

The purpose of the dissertation was to determine whether cervical spine joint adjustment had an effect on the hearing acuity in individuals with some level of sensorineural hearing loss.

Thirty symptomatic patients of either gender participated in this study. These patients were recruited by the use of advertisements placed in the Chiropractic Day Clinic, University of Johannesburg, Doornfontein Campus and by word of mouth.

The inclusion criteria required the patients to present with some level of sensorineural hearing loss, be over the age of fifty years and have no contra-indications to chiropractic adjustments.

Objective data was obtained by the Interacoustics Diagnostics Audiometer AD 229b, which determined the level of auditory acuity before and after chiropractic treatment was administered. Middle ear function and acoustic reflex was also tested with the GSI 38 Auto Tymp acoustic reflex machine.

The objective results demonstrated that there was no statistically significant increase in auditory acuity following either the chiropractic treatment, or the detuned ultrasound treatment.
In conclusion, it was shown that chiropractic adjustments in some patients presenting with sensorineural hearing loss, in the same subjects, exhibited a clinical improvement in hearing acuity however, not a statistically significant improvement following the treatment protocol discussed in the chapters that follow.

These improvements suggested that the adjustment resulted in a decrease in sympathetic nervous system stimulation and an increase in blood flow through the labyrinthine artery, and therefore an increase in auditory acuity. These improvements were noted to a larger degree in individuals with a greater sensorineural hearing loss and not across the entire sample population.
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