

Members involved in this research

Jacob Palmer
Angelo Pierce
Dr. Stephanie Sullivan
Dr. Mark Amos
Dr. Tim Guest
Dr. John Markham
Dr. Lawrence Hansen

Quote on why I have chosen this research:

I have always been interested in how the brain stores memory. Once I embarked on the Chiropractic journey that curiosity magnified even more so.

Title of Project:

The impact of chiropractic Activator adjustments on memory and reaction time: a pilot study

Dates of Research Project:

August 2014- in progress presently

Abstract

Objective:

Evaluation of the impact that chiropractic adjustments have on memory and reaction time through initial assessment and testing in a healthy population.

Background:

One individual's memory differs from the next, some can remember scores of random characters, facts, figures, and prose that has been set in no certain order and others will struggle with "the magical number 7, plus or minus 2" as described by Miller in his studies on memory (1). Young adults can recall only 3 or 4 longer verbal chunks, such as idioms or short sentences (2). The difference in memory from one person to another provides an opportunity for potential intervention. A review of the literature has revealed that there have been no studies to date that particularly focus on chiropractic and its relation to memory.

Methods:

Sixteen Healthy individuals (8 males and 8 females) aged 18 to 65 were recruited for the study. The attached diagram details the progression of the participants through the study.

Results:

Simple Memory Task:

Memory had no remarkable results to present. Post memory % correct was 100 for both groups.

Analytical Abilities Test:

The adjustment group demonstrated statistically significant improvements in the response time for the pre and post analytical abilities test ($p=0.4464980852$) There was no significant difference found between groups for the analytical abilities test ($p=0.0101346596$ for group 1, $p=0.0664402139$ for group 2). There was a trend toward improvement. The response time for the analytical abilities demonstrated greater % change decrease (41.68%) compared to the sham group (30.87%). Sample size of the test was 32 with a .80 power using analytical abilities test as the variable.

Simple Reaction Time Task:

The adjustment group demonstrated statistically significant improvements in the response time for the pre and post reaction time test ($p=0.1905333315$) There was no significant difference found between groups for the simple reaction time test ($p=0.0101346596$ for group 1, and $p=0.3138814651$ for group 2). There was a trend toward improvement. The response time for the simple reaction test demonstrated greater % change decrease (27.58%) compared to the sham group (7.70%). Sample size of the test was 74 with a .80 power using reaction as the variable.

Conclusion:

After initial analysis of the data we have decided to extend this study. The study has been extended to 32 participants and is continuing.