

CALIFORNIA STATE SCIENCE FAIR 2010 PROJECT SUMMARY

Name(s)

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Project Number

J0617

Project Title

To Remember, or Not to Remember, That Is the Question

Abstract

Objectives/Goals

The goal of this experiment is to evaluate the effectiveness and impact of cognitive training aimed at improving memory functioning for people in the mild to moderate stages of AD (Alzheimer's Disease).

Methods/Materials

MATERIALS: Mini Mental State Examination (MMSE) (A test used to determine what stage of AD a person is in), California Verbal Learning Test (CVLT) (A list consisting of nine objects), AD Patients (18 subjects in the mild to moderate stages of AD)

I initially tested 25 subjects who had been diagnosed with AD with a test called the MMSE to eliminate those who were in the advanced stages. Next, I tested all of the remaining subjects with the CVLT. I tested the experimental group with the CVLT every Saturday morning, and spent the exact same amount of time with each member of the control group, but did not train them. I did this procedure by conducting a total of twelve trials over a period of five months. After the series of twelve trials, I used the CVLT to test both groups as a comparison in order to see if the training was effective.

Results

For my overall result, I found that cognitive training is significantly effective at improving the memory of people in the mild to moderate stages of AD, which strongly supports my hypothesis.

Conclusions/Discussion

The purpose of my experiment was to evaluate the effectiveness and impact of cognitive training aimed at improving memory functioning for people in the mild to moderate stages of AD. I hypothesized that cognitive interventions would improve the memory of people with AD who are in the mild to moderate stages. After conducting my experiment, I found that cognitive training is significantly effective at improving memory functioning, thus proving my hypothesis to be true.

Summary Statement

The main aim of this experiment is to evaluate the effectiveness and impact of cognitive training aimed at improving memory functioning for people in the mild to moderate stages of AD.

Help Received

My mom drove me to the Alzheimer's care facility every week and made several calls for me to different organizations and facilities. Dr. Claudia Kawas and Dr. Carrie Peltz provided me with the CVLT and the MMSE and gave me feedback about my experiment. My science teacher helped me make my graphs.