

# CALIFORNIA STATE SCIENCE FAIR 2009 PROJECT SUMMARY

Name(s)

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**Project Number** 

**S1405** 

# **Project Title**

# Vision Therapy: Measuring Prescription Percent Improvement among Visually Impaired Patients Undergoing Vision Therapy

# Objectives/Goals

# **Abstract**

While there are many quick fix procedures open to the general public, such as Lasik Eye Surgery, Visual Therapy is an available branch of alternative medicine for the visually impaired. My hypothesis proposes that vision therapy will increase eyesight performance and specifically decrease impairment by at least 30% in less than four months.

#### Methods/Materials

I have collected data from three local certified professionals who supervise my fourteen subjects# optical needs by means of vision therapy. Physically, I returned to visit each therapist on a monthly basis. No researcher to patient interaction ever occurred. The only human interaction taken place was between that of the patient and doctor. Moreover, the identities of the subjects used in the research was kept anonymous for confidential reasons. Over a three month period, data was collected in a bi-monthly fashion. No direct materials were personally used on my behalf to determine the prescription values among the patients. The duty in action belonged to the visual therapists, whom I had a chance to observe performing visual therapy sessions.

#### Results

Based on my overall analysis of the subjects, the visual impairments of the subjects averaged a prescription decrease of 41.38% over a span of three months. In addition, each subject averaged a 6-10% prescription change each week within the first three months of beginning vision therapy.

## **Conclusions/Discussion**

Within my research, the value of vision therapy is no discarded matter. In only three months, a 41.38% impairment decrease was observed among fourteen diagnosed visual therapy patients. The subjects proved to religiously continue their visual therapy procedures during the three months and finish with an unconsciously clearer view of the world near the study#s end. While a handful of variables were not accounted for in this particular experiment, future research of vision therapy may include gender, age, specific eye diseases, time spent on strenuous eye labors, and even environment. While a few months period is relevant, a year-long study would be even stronger. With a year-long amount of data collections, I would be able to delineate the possible plateau beginning to develop. Moreover, a deeper comparison between surgical eye procedures and alternative visual therapy may exist in a qualitative light.

### **Summary Statement**

As an alternative route to surgical procedures, my project focuses on the efficacy of visual therapy to, potentially, society at large.

## **Help Received**