



CALIFORNIA STATE SCIENCE FAIR 2011 PROJECT SUMMARY

Name(s) <p style="text-align: center;">Idalis Y. Rivera-Ramirez</p>	Project Number <div style="text-align: right; padding-right: 10px;">31582</div>
Project Title <p style="text-align: center;">I Said Red, You Said Blue</p>	
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> Objectives/Goals <p>The objective is to determine if the Stroop Effect will change the way human subjects process mixed colored signals, when using people who have no known ailments in comparison to those who have ADHD/ADD or Dyslexia.</p> </div> <div style="width: 45%; text-align: center;"> Abstract </div> </div>	
Methods/Materials <p>Time each individual by showing them the first test and having the person say the colors that they see as fast as they can. Then record the amount of time that it took them to successfully say the colors. Repeat this for Test 2 and Test 3. Record and compare the ADHD/ADD subjects, Dyslexic subjects and the control group results. The materials utilized were a stopwatch, paper, a pencil and three Stroop Effect tests. I tested 15 people in three separate categories to total 45 test subjects ranging in age from 10 to 50 years. The categories were people diagnosed with ADHD/ADD, people diagnosed with Dyslexia and a control group with no known ailments.</p>	
Results <p>The results from Test 1 using colored rectangles showed that test subjects with ADHD/ADD averaged 5.17 seconds, test subjects with Dyslexia averaged 6.83 seconds and the control group with no known ailments averaged 4.76. The results from Test 2 using the words written with the same color ink as the word, had test subjects with ADHD/ADD averaging 6.06, test subjects with Dyslexia averaging 8.38 and the lowest score of 3.82 was by the control group. The results from Test 3 showed that the test subjects with ADHD/ADD averaged 10.38 seconds to complete the test. Test subjects with Dyslexia had the highest of all the times tested with an average of 14.94. The control group with no known ailments had a low average of only 8.55 seconds.</p>	
Conclusions/Discussion <p>The results supported my hypothesis because the subjects with ailments were unable to process and recognize the information as quickly as those with no known ailments. I felt that the test subjects that had known ailments did not do well because they had difficulties with distractibility, disorganization and frequent switching between the tasks. I came to this conclusion because of their facial expressions, body movements, and constant glances at the stop watch. This caused them to have slower reaction times. By using this information teachers can better understand their students and adjust how they teach students with such ailments. These results also helped me understand how my brother (diagnosed with ADHD), handles mixed signals.</p>	
Summary Statement <p>By testing and comparing people with ADHD/ADD, people with Dyslexia and a control group with no known ailments, I found out how ailments affect how the brain handles mixed signals.</p>	
Help Received <p>My parents helped me organize my board; purchase supplies, and taught me how to create charts using Excel. Mrs. Mina Blazy proof read my work and has supported me throughout my three year project.</p>	