



CALIFORNIA STATE SCIENCE FAIR 2013 PROJECT SUMMARY

Name(s) Autumn P. Luna	Project Number J0712
Project Title Finding the Correlation Between Impulsivity and a Student's GPA	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals A large population of students in the nation with impulsivity disorders are thought of to be less intelligent, or not as successful in academics- but, there is no proof of this widely believed statement. The purpose of this experiment was to test if impulsivity does in fact have an effect on a student's GPA or not. The predicted outcome of this experiment was that a student's impulsivity, would in fact affect a student's GPA, because of the inability to control the brain's first impulse to focus on a new subject or idea.</p> <p>Methods/Materials Impulsivities of the test subjects used in the experiment were determined by their results of the Stroop Test. Using certified Stroop Tests created by Stoelting Company, student test subjects were given a set of standardized instructions, and performed the three stages of the Stroop Test in the 45 second time limit for each stage. Their scores of completed words and colors, were recorded and calculated to find the T-Scores, with the help of the certified Stroop Test manual (Obtained by the APA). The T-Scores of Results were evaluated on the spectrum. The Interference Score- Color Score subtracted by Color-Word Score, was used with the student test subject's GPA to find a correlation using SPSS Software.</p> <p>Results There was a negative correlation between the student test subjects' GPAs and Interference scores, meaning that the higher the interference score, the lower the student's GPA. Sadly, the correlation of -0.148 was not of significance, because the number valuing significance was $.245$, but for a correlation to be relatively significant, the number must be less than 0.05. Therefore, even though the results did show a negative correlation (the lower the GPA, the higher the interference) with the two variables, there was no significance found, therefore, not supporting the hypothesis.</p> <p>Conclusions/Discussion The purpose of this experiment was to find a correlation between impulsivity and intelligence to see if one's impulsivity could affect their learning. There were no major findings after analyzing the data from the experiment, the correlation of the subjects' impulsivity and GPA was negative, but had minimal significance. Overall, though this experiment did not completely find the predicted results, it did give logical reasons for the data, and also discovered new and interesting data that may want to be further researched.</p>	
Summary Statement The purpose of this experiment was to find a correlation between impulsivity and intelligence to see if one's impulsivity could affect their learning.	
Help Received My father (Qualified Scientist) advised me with performing the Stroop Test and let me use his data analysis software, SPSS. He also taught me about the executive function.	