



CALIFORNIA STATE SCIENCE FAIR 2012 PROJECT SUMMARY

Name(s) Adam Villalpando	Project Number S1215
Project Title Investigating the Effects of Concussion on Memory and Concentration	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The term concussion or MTBI, mild traumatic brain injury is defined as a head injury with temporary loss of brain function which can cause a variety of long term symptoms, emotional and physical, to the victim. I chose to study the effect of concussions as a student athlete since I am concerned and want to examine the risks associated when playing American football. Furthermore, this study interests me because millions of people gather on February, Sunday afternoon, to see their favorite sport being played at its peak unknowingly watching their favorite players risks their lives on that field. The study explores the risks high-school student athletes face while chasing the dream of winning a scholarship. My fellow classmates who have experienced concussions were carefully studied. I observed these students and analyzed how much this has affected their academics and ability to concentrate in the classroom.</p> <p>Methods/Materials The procedure is quite simple. I had to find 8 student-athletes who have experienced concussions and are willing to participate in the study. I analyzed the significance of their concussions by giving them a spelling quiz; observed their attention span in the classroom setting when given a 30- minute lecture to see how long it would take them to refer to their electronic gadgets and stop paying attention to the speaker. I compared the results to the other 8 regular student participants who have not experienced a concussion.</p> <p>Results The results showed that on average the regular students performed 12.5% better than student-athletes (who have experienced concussions) when given a spelling test. Likewise, the average attention span of student-athletes is 15% less than regular students.</p> <p>Conclusions/Discussion These data proved that students who have concussions have short term memory loss and a tendency to have shorter attention spans than students who haven't had a concussion. Should this be considered a tragedy or a cost for American entertainment?</p>	
Summary Statement This research seeks to investigate if concussions acquired through sports can affect a student-athletes' performance in the classroom.	
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