



**CALIFORNIA STATE SCIENCE FAIR
2017 PROJECT SUMMARY**

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| Name(s) Sabahat A. Nabiha | Project Number J0715 |
| Project Title Alzheimer's Relieves: Cognitive Training Put to the Test. Seeking the Best Method of Cognitive Training | |
| <p style="text-align: center;">Abstract</p> <p>Objectives/Goals As cognitive training has been used as a primary treatment of several disabilities as well as memory diminishing diseases, my main objective of this project was to prove that different techniques of cognitive training have the same impact on Alzheimer's Patients.</p> <p>Methods/Materials I contacted a senior center that allowed me to conduct my experiment on the residents who were all aged 64 and up. I interviewed several seniors to end up with my 10 Alzheimer's patients who were all in the early to moderate stages of Alzheimer's Disease. For test 1, I created a replica of a method of cognitive training which I called "hands-on training". I manually did the training for each of my subjects and then giving them a short quiz. I got my results by the accuracy of the quiz. I also downloaded a cognitive training app called BrainCoach, and I also gave another memory related quiz. Likewise, I got my results by the accuracy of the quiz. I did a total of 2 trails. Each trail had a 3-day gap between them.</p> <p>Results When I compared the graphs, I saw that there was not a major difference between the scores. So I did standard deviation to find that the standard deviation of scores was low, meaning that most of my scores were very close to the average. My variance point was 1.26, and the difference in the average 0.3, meaning that there wasn't a significant difference between the scores.</p> <p>Conclusions/Discussion In conclusion, my results support my hypothesis which basically states that there is no correlation between the methods of cognitive training versus the positive effect of the training. As Alzheimer's Disease has been on the rise, many families have their loved ones do cognitive training as primary treatment. And thousands of those families believe that the most expensive method of cognitive training is the best. Through the help of science, I proved that not only the most expensive method of training is the best, but also that there is no correlation between the method of cognitive training versus the positive effect of the training.</p> | |
| Summary Statement I tested the effects of two different methods of cognitive training on patients who suffer from Alzheimer's Disease. | |
| Help Received Kellie Smith from UCLA Semel Institute, my mentor through my project. The Meridian of Culver Village, for allowing me to do my experimentation. My parents for helping me complete my volunteer hours. My math and science teacher as well as my advisor for helping me at almost every step of my | |