



CALIFORNIA STATE SCIENCE FAIR 2016 PROJECT SUMMARY

Name(s) Lily C. Purvis	Project Number J0422
Project Title Reading Emotions in the Eyes: Age and Gender Differences in Empathy	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of my study was to determine if children or adults are better at identifying other people's emotions just by looking at their eyes. I hypothesized that children would perform better than adults because children are more dependent on other people and more focused on their social relationships with friends and family.</p> <p>Methods/Materials To test my hypothesis I collected data from 89 junior high students (mean age = 13) and 109 adults (mean age = 28). I created an online test that had 25 questions. Each question showed a photo of a set of eyes, with four possible emotions. Subjects had to choose which emotion they thought was shown in the photo. This test was based on a longer test (Reading Emotions in the Eyes Test), which was developed by scientists to study empathy. All participants completed the online test in their classroom or at home. For students, I gave the test in science classes. For adults, I posted the test on Amazon Mechanical Turk, a website where people can complete online projects for a small payment.</p> <p>Results I calculated the average score for adults and children, and for males and females in each group. Contrary to my hypothesis, adults performed significantly better than children. Adults had an average score of 76.08%, while children had a score of 70.48%. The adults did 5.6% better. In addition, female participants performed better than males in both age groups. Females scored an average of 74.96%, while males scored an average of 71.64%.</p> <p>Conclusions/Discussion The results of my study showed that age and gender are factors that affect people's ability to read other people's emotions through their eyes, which is an important component of empathy. However, the age difference was opposite of what I predicted. Adults, rather than children, performed better. One reason may be that adults have more experience with human emotions, more time to understand what each emotion looks like. Another reason might be that the photos showed only adult faces. Children might have performed better if they had seen photos of children. My study also found that females did better than males in both age groups. This may be due to a maternal instinct that gives women insight into what their child could be feeling even when they cannot yet voice their emotions. Another reason might be that girls are taught to be more caring toward other people.</p>	
Summary Statement My study compared children and adults in their ability to identify other people's emotions just by looking at their eyes (an important component of empathy).	
Help Received My mother helped me obtain human subjects approval and post the surveys online at Amazon Mechanical Turk. She also helped me conduct some of the statistical analyses. My science teacher helped me collect data in three of her sciences classes.	