

CALIFORNIA STATE SCIENCE FAIR 2003 PROJECT SUMMARY

Name(s)

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Project Number

J0308

Project Title

Driven to Distraction

Objectives/Goals

Abstract

I wanted to see whether talking on a cell phone impairs driving ability, which has not been studied very much. So I created an experiment using a video game that simulates driving, and found 30 subjects of all ages to participate in the test. Going in, I hypothesized that cell-phone conversation would impair driving.

Methods/Materials

First, subjects "drove" the videogame course without talking on the phone, and their time was recorded. Then, they repeated the game, but had to answer a series of 25 unrelated questions during a cell-phone conversation. Once again, their times were recorded. I compiled the results, and broke them down into several subcategories such as "high videogame comfort level" or "medium to high cell-phone use while driving."

Results

The video game test of driving skills overwhelmingly showed that my hypothesis was correct: Cell-phone conversation impairs driving. A total of 21 of 30 people tested scored worse when talking on the phone. Every way I broke down the data, I came up with the same result: Cell-phone use made the "drivers" slower, or less effective, on the course.

Conclusions/Discussion

My overall results showed the average driving time increased by 4.3% but the ranges in subgroups varied more. The average driving time for females, for instance, varied by 14.4%, a much higher statistic while people who had a high comfort level with video games had a blip of an increase, only 0.5%.

If I were to do this project again, I would try to take the learning curve into account, which I believe would make my findings even stronger. I also would try to account for why females faired the worst while using a cell phone and driving.

Summary Statement

Does talking on a cell phone while driving impair a person's ability to drive?

Help Received

Sister and mother helped ask cell-phone questions; father helped analyze data; mother proofed graphs and report; neighbors and friends were test subjects.