



CALIFORNIA SCIENCE & ENGINEERING FAIR 2019 PROJECT SUMMARY

Name(s) Robert Ikeda	Project Number J0408
Project Title Does Parental Guidance Affect Smartphone Addiction?	
<p style="text-align: center;">Abstract</p> <p>Objectives The purpose of this project is to determine whether or not parental limits affect middle school students smartphone addiction. My hypothesis is that the more limits parents give, the less addiction student would have because it is their parents who provide them with their phones, and the students develop their phone use habits under the influence of their parents.</p> <p>Methods To conduct my experiment, I made a questionnaire on google forms. The first test was the Smartphone Addiction Test based on the Internet Addiction Diagnostic Questionnaire (IADQ) developed by Dr. Kimberly Young. The second test was the Parental Limits Test that I developed and is based on tips and advice from experts on what parents should do with their children s smartphone use. A total of 490 students from Sequoia Middle School took the questionnaire. I reviewed the data and analyzed the statistics using Excel. I also separated the students into the addicted and the non-addicted groups based on IADQ to find out if there is any statistically significant difference between each group in both tests.</p> <p>Results There was no correlation between the total of the Parental Limits Test and the Smartphone Addiction Test ($r = 0.19$). There was a positive correlation between scores indicating addiction on the Addiction Test and the frequency of smartphone use by students alone in their own rooms ($r = 0.35$). Another correlation was between the total of scores indicating addiction on the Addiction Test and the time of smartphone usage per day ($r = 0.36$). I divided the students into addicted and the non-addicted groups and there were 75 out of 440 students that were in the addicted group. There was a statistically significant difference in the mean of the Parental Limits test between the addicted group and the non-addicted group. The mean was higher (higher score means less parental control) in the addicted group (25.8 out of 40) than non-addicted group (24.07) with a P value of 0.04. My data also showed that the female students were more addicted than the male students. The mean of female students Addiction Test score (23.44 out of 40) was higher than male students (21.44) with a P value of 0.0004.</p> <p>Conclusions My hypothesis the more limits that parents give, the less addiction student would have was partially supported. There was not a correlation between the total scores of the two tests, but the data showed that the frequency of usage by students alone in their rooms and the amount of smartphone use each day were risk factors for addiction.</p>	
Summary Statement I found that the frequency of smartphone use by students alone in their rooms and the amount of smartphone use each day were risk factors for smartphone addiction.	
Help Received Mrs. McCracken gave me general guidance. My mother helped with the statistical analyses.	