



CALIFORNIA SCIENCE & ENGINEERING FAIR 2019 PROJECT SUMMARY

Name(s) Aarya Mukherjee	Project Number J0412
Project Title Puff the Vaping Dragon: A Study of Knowledge and Interest in E-cigarettes among Middle School Students	
<p style="text-align: center;">Abstract</p> <p>Objectives The objective of this project is to determine the rate of use, knowledge of different types, health risks and interest in the future use of E-cigarettes among suburban middle school students and compare this knowledge to that of their parents.</p> <p>Methods I built the survey based on my research of E-cigarettes. I obtained consent from the parents of 40 7th/8th grade students and 17 parent participants. I administered the survey to all the students at the same time in a classroom. The parent participants answered the survey at home. ALL THE ANSWERS WERE COLLECTED ANONYMOUSLY. Data was analyzed using Microsoft Excel.</p> <p>Results 0% of 7/8th-grade students reported use of E-cigarettes compared to 6% of parents. 75% of students recognized both Juul and Vapepen whereas 65% of parents knew of Juul and 35% of Vapepen. 93% of students knew of Juul's nicotine content compared to 71% of the parents. 93% of students vs 100% of parents chose "gateway to other recreational agents" as a short term health risk with E-cigarette use. 63% of students vs 100% of parents selected addiction as a long term health risk with E-cigarettes. 75% of students indicated a desire to try E-cigarettes in the future despite recognizing possible health risks. Relieve stress and peer pressure were the most common reasons cited for wanting to try E-cigarettes. Grocery store at 55% and friend/acquaintance at 48% were the most frequent sources cited by students to obtain E-cigarettes. Only 18% of parents indicated interest in learning about E-cigarettes compared to 53% of students. Students answered internet and friends as most common resources for learning about E-cigarettes.</p> <p>Conclusions This survey revealed that the majority of 7th/8th students indicated a desire to try E-cigarettes in the future. Students were more interested in learning about E-cigarettes than their parents. Overall, students were more knowledgeable about different types of E-cigarettes and nicotine content than their parents. On the other hand, parents cited more health risks with E-cigarette use. Student's knowledge of possible health risks with E-cigarettes did not discourage them from wanting try them. Therefore, these students may be at risk for using E-cigarettes in the future. Educational campaigns may need to be applied to decrease E-cigarette use among adolescents.</p>	
Summary Statement This study revealed a high desire to try E-cigarettes among middle school students despite their knowledge of the possible health risks associated with use.	
Help Received The survey used in this project was designed by me based on background research. Dr. Gideon St. Helon, a researcher at UCSF reviewed the survey and made some recommendations.	