



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Sarah T. Silverstein	Project Number S0317
Project Title Attitudes, Exercise, and Stress: A Longitudinal Study of Dental Students, Year 3	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals Dental school is a stressful experience, but there is little research on factors that can mitigate stress. This longitudinal study tests the hypotheses that positive attitudes and exercise will be associated with lower stress in dental students, and that the amount and sources of stress will change over time.</p> <p>Methods/Materials 12 US dental schools were contacted; 4 participated. Students completed the Dental Environment Stress (DES) scale, Perceived Stress Scale (PSS), Stress Rating and demographic questions at the start of school (Year 1), and after 11.7 weeks (Yr 1 Time 2), 1 year (Year 2) and 2.2 years (Year 3) when life satisfaction, optimism, happiness and exercise were also assessed.</p> <p>Results Of 407 students, 234 (142 men, 92 women) responded at Years 1 and 3; 202 responded at Years 1, 2 and 3. Life satisfaction, optimism, happiness ($p < .0001$) and exercise ($p < .05$) were inversely associated with DES, PSS and stress ratings. Life satisfaction, optimism and happiness increased with exercise. Men, married and older students had more positive attitudes and lower stress. Men, single and younger students exercised more. Stress increased between Years 1 and 3 ($p < .0001$ for DES and PSS; $p = .048$ for Stress Rating), but changes in stress varied by school and paralleled changes over time in exercise. Stress from schoolwork sources was high at Year 1, increased at Year 2 ($p < .01$) but decreased at Year 3 ($p < .01$) while school atmosphere items had low ratings at Year 1 but increased over time ($p < .0001$).</p> <p>Conclusions/Discussion My hypotheses were supported. Positive attitudes and exercise were associated with lower stress suggesting possible interventional strategies to benefit dental students. Stress increased over time; variation between schools may reflect differences in exercise patterns. Sources of stress changed with school work items decreasing and atmosphere items increasing in importance over time.</p>	
Summary Statement My project examines how attitudes and exercise affects stress in dental students and how stress changes over time.	
Help Received Dr. Stephen Wotman, Dr. James Lalumandier, Mr. Philip Aftoora, Dr. Craig Yarborough, Dr. Richard Simonson, Mr. Wilson Leung, Dr. Charles Shuler, Dr. Navazedesh, and Ms. Ursula Czoik administered surveys.	