



**CALIFORNIA STATE SCIENCE FAIR
2011 PROJECT SUMMARY**

Name(s) Alexandra N. Vredenburgh	Project Number 31075
Project Title Adolescent Coping: What Factors Contribute to Teenage Eating Disorders?	
<p align="center">Abstract</p> <p>Objectives/Goals Last year my friend developed a severe eating disorder and was sent away for three months to a hospital. As a result, I became interested in how adolescents cope with stress and started developing questions such as, why are some kids happier? Why do some teens cope better? How do they cope? How much stress can someone take without developing problems? Why do some kids develop maladaptive disorders such as eating disorders? Anorexia is the 3rd most chronic condition among adolescent girls after obesity and asthma and has the highest mortality rate of all psychiatric diagnoses, as high as 20% in long-term studies.</p> <p>Methods/Materials 260 people participated in my study; 48.2% males, and 51.8% females. They ranged in age from 13 to 18. Three teachers had their students participate during class time and gave extra credit. Participants completed a 3-part questionnaire, including a resilience and coping evaluation developed for this study, an eating disorder test, and a stress test.</p> <p>Results People with eating disorders had significantly more stress than people without eating disorders ($F(1,226)=21.25, p < .01$). Weight was not a significant predictor of whether someone had an eating disorder; satisfaction with appearance was the only significant predictor $B(1)=-.596, p<.05$. People with eating disorders listed more negative things about their life ($t(115)= -3.474, p<.01$) and appearance ($t(114)= -3.487, p<.01$). Adolescents that were satisfied with their friendships had lower stress ($t(241)=2.499, p<.05$). Adolescents that were satisfied with their family had lower stress ($t(241)=2.629, p<.05$).</p> <p>Conclusions/Discussion Adolescents are experiencing more stress than ever. The struggle to fit in, make new friends, and be successful have driven students to face the reality and complications of growing up. This problem has increased over the past decade and will continue unless something is done. There are approximately 42 million adolescents in America. 24% of my participants had some form of eating disorder (anorexia, bulimia, diet pills, laxative use). If my sample is representative, there would be approximately 10.08 million American adolescents with this disorder. If only one percent of teens are helped by a school-based intervention, about 100,800 teens lives could be dramatically improved. To date, there is no cure for eating disorders. I am hoping that through my research I am able to eventually help develop a cure.</p>	
Summary Statement This study evaluates the relationship between stress and eating disorders and the factors that predict eating disorders.	
Help Received UCSD doctoral student Laura Case met with me and helped me get started with my research. Professor Michael Kalsher, Rensselaer Polytechnic Institute, taught me statistics. My brother, Michael helped with my poster. My father let me collect data at the school where he teaches. My mom edited my report.	