



CALIFORNIA STATE SCIENCE FAIR 2011 PROJECT SUMMARY

Name(s) Axel A. Perez	Project Number 31067
Project Title Cheering: Good or Bad?	
Abstract Objectives/Goals My study was to determine if psychological reinforcement would affect the free throw accuracy of an individual. I also wanted to find out if psychological reinforcement would affect their intrinsic motivation or their psychological thoughts. Methods/Materials 19 participants were selected and all were given consent forms so their parents and themselves could sign them. One at a time, they would come in to the gym and shoot 12 free throws for each reinforcement. For positive and negative reinforcement, a positive/negative statement would be read every time the ball was shot and the free throw accuracy would be recorded. After every 12 shots, this question would be read: "If you were to shoot 10 more times how many do you think you would make according to how you feel you have done thus far?" The results would be collected and studied. Results The free throw accuracy of the control group was 28%, the free throw accuracy of the positive reinforcement group was 33%, and the free throw accuracy of the negative reinforcement group was a surprisingly 38%. The control group thought they would have a 45% free throw accuracy, the positive reinforcement group thought they would have a 42% free throw accuracy, and the negative reinforcement group thought they would have a 47% free throw accuracy. I researched on the people that 20% or better with either positive or negative reinforcement also. That made me think more about the individual and made things clearer in my mind. Conclusions/Discussion The accuracy of shooting free throws is affected by psychological reinforcement. The negative reinforcement group did better than the control and positive reinforcement group. I believe that the negative reinforcement group had a better free throw accuracy than both other groups because when given negative reinforcement, the level of intrinsic motivation and competitiveness increased the performance. I also believe that when positive reinforcement is given, the individual would feel no need to improve so their level of intrinsic motivation wouldn't increase as much. I also measured the results for the participants that performed better with positive or negative reinforcement. That helped me see that some people are better with positive reinforcement and others with negative reinforcement. In conclusion the data collected in this experiment supports my hypothesis but more research can be done to reach further conclusions.	
Summary Statement My project is about psychological reinforcement and how it can affect the intrinsic motivation and free throw accuracy of an individual by saying positive and negative statements.	
Help Received Mother and Grandfather helped correct spelling mistakes and brain storm ideas; Mr. Bauser helped reserve gym	