

Effects of a 16-Week Home-Based Strength Training Randomized Controlled Trial on Depression in Obese Latino Adolescent Boys

EMILIO RODRIGUEZ, RAKAIHYA THOMAS, JONATHAN HERNANDEZ AGUILAR, MELANIE PANOSIAN, ALEXANDRA KNIPPRATH, ALLAN, KNOX, & LOUISE A. KELLY

Exercise Science Department, Biology Department, Psychology Exercise Science; California Lutheran University; Thousand Oaks, CA

Category: Undergraduate

Advisor / Mentor: Kelly, Louise A. (lakelly@callutheran.edu)

ABSTRACT

While the data has shown that the overall prevalence of depression is 6% in adolescents, these statistics are primarily based on white children. Latino children are more likely to suffer anxiety, depression and other mental health disorders compared to their non-Latino peers. While incidents are higher in Latino kids (22% suffer from depression), few receive treatment when compared to white children (8% vs 14% respectively). Given the prevailing burden and impact of mental health disorders in youth, it is essential that effective interventions are identified and implemented. **PURPOSE:** To assess the effects of a 16-week (2x/week) home-based strength training (HBST) program on the reduction of depression symptoms in obese Latino adolescent boys. **METHODS:** 32 Obese Latino boys aged 14-17 years, were recruited, and randomly assigned to one of two groups: 1) Control (n=16) or 2) Home-Based Strength Training (n=16). C – No intervention. HBST – Progressive program consisted of a 2X weekly program for 16 weeks. Body Mass Index (BMI) percentiles for age and gender were determined using CDC age-appropriate cut-offs. Height and weight were measured using a beam medical scale and wall-mounted stadiometer. Depression was assessed using the Center for Epidemiological Studies Depression scale (CES-D). All testing was performed before and after the 16-week intervention. **RESULTS:** A total of 30 boys (mean age = 15.5 + 0.9 years) completed the study. All thirty adolescents had a BMI in the 95% percentile. All participants attended >85 % of the strength training sessions. Repeated Measures General Liner Model showed significant improvements in the intervention group only, with participants reporting an “increased happiness” (p=0.06) and increased “enjoyment in life” (p=0.009). In the intervention group, scores improved for questions such as “I felt depressed”, and “I felt sad”, although these improvements were not statistically significant (p=0.16, p=0.17 respectively). **CONCLUSION:** In a sample of obese male Latino adolescent males, small improvements were seen in feeling happy and enjoyment of life after a 16 week, 2x week home based strength training intervention. Future studies should consider strength training as an acceptable modality for improving mental health in obese Latino adolescent boys.