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Structured Resistance Training Improves Self-Esteem and Strength in Previously Untrained College Females

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In addition to regular exercise's physical benefits, research has recognized its potential psychological benefits. **PURPOSE**: To determine structured resistance training's effect on strength, self-esteem, stress, and body composition in untrained college females. **METHODS**: Healthy, untrained college females (n=38) completed barbell back squat, bench press, and deadlift 5-repetition maximum (5-RM) testing, the Rosenberg Self-Esteem Scale (RSES), the Perceived Stress Scale (PSS), and bioelectrical impedance analysis of body composition, before and after 8 weeks of supervised, twice weekly resistance (n=22) or aerobic (n=16) training. Resistance training consisted of the barbell back squat, deadlift, and bench press with linear progression of training load, whereas aerobic sessions involved moderate intensity group exercise (primarily walking). Within and between group changes were analyzed using t-tests. A Bonferroni type adjustment was used and a p-value<0.013 was considered statistically significant. **RESULTS**: Data are reported as mean ± SD. Although the aerobic group was younger than the resistance group (18 ± 1 versus 19 ± 1 yrs, respectively; p<0.01), there were no differences in height, weight, percent fat, 5-RM squat, 5-RM bench press, 5-RM deadlift, RSES score, or PSS score between the groups before training. Participants completed over 80% of their training sessions. There were no changes in weight, percent fat, 5-RM values, RSES score, or PSS score for the aerobic group following the completion of the 8-week training intervention. In contrast, the resistance training group significantly increased percent fat (2.0 ± 2.0 %, p<0.001), 5-RM squat (52 ± 20 lbs, p<0.001), 5-RM bench press (16±7 lbs, p<0.001), 5-RM deadlift (45 ± 17 lbs, p<0.001), and RSES score (3.1±3.3, p<0.001). PSS score did not change with resistance training (p=0.10). The between group differences in 5-RM squat, bench press, deadlift, and RSES score were significant (all p<0.01). **CONCLUSION**: Although percent body fat increased slightly, structured resistance training in previously untrained college females positively impacted their physical strength and self-esteem. Further research is needed involving stress, as the college's final exam schedule may have impacted the results.