



Assessing Relationships Between Weight Training and Self-Esteem in High School Students

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Purpose of Study

The purpose of this study was to assess the relationships between weight training and self-esteem in high school students. Participants in a weight training class were asked to take a pre/post test measuring self-esteem and social physique anxiety. Participants in the weight training class were also pre/post tested for muscular strength utilizing a one repetition maximum lift for bench press, squats, push-ups (total number in 60 seconds), and sit-ups (total number in 60 seconds). Participant's weight trained for nine weeks. Participants in a Health class were asked to take a pre/post test measuring self-esteem and social physique anxiety. These participants served as a control group and did not participate in any weight training activity during class.

Methodology

Participants-120 high school students(9-12)
Experimental group
80 total (65 males & 15 females). Aged (14-19, $M=16.48$, $SD=1.09$).
Control group
40 total (25 males & 15 females). Aged (14-18, $M=15.05$, $SD=1.06$).

Rosenberg Self-Esteem Scale (Morris Rosenberg, 1965)

10 item Likert scale questionnaire. Overall measure of one's self-esteem. Scores range from 10 to 40.

Social Physique Anxiety Scale (Hart et. al., 1989)

Measures the amount of anxiety a person perceives from an outsider evaluating their own body. Scores range from 9 to 45.

Procedures

IRB, Principal, Weight Instructor, & Parental Approval.

Pre/Post test for RSE, SPAS.

Pre/Post test for muscular strength (bench press, squats, push-ups, sit-ups).

9 weeks of training (5 days/wk, 90 min./day)

Bigger-Faster-Stronger (BFS) program developed by Dr. Greg Shepard (1976).

Control Group

Results

Question #1: Is there a significant difference in scores on the RSE based upon whether or not participants received weight training?

RSE pretest was not significant ($t=-1.59$, $df=118$, $p=.114$).

RSE posttest was significant ($t=-2.34$, $df=118$, $p=.021$). There was a significant difference in self-esteem for weight training recipients.

Dependent t-test showed there was a significant difference between pre/post test means for RSE at the .05 level of significance ($t=4.91$, $df=79$, $p=.000$) for weight training recipients.

Pre and Post Test Results on the Rosenberg Self-Esteem Scale

Group	Pretest		Posttest	
	M	SD	M	SD
Experimental	16.54	4.70	15.03	4.34
Control	18.00	4.84	17.10	5.02

Question #2: Is there a significant difference in scores on the Social Physique Anxiety Scale based upon whether or not participants received weight training?

SPAS pretest was not significant ($t=-1.65$, $df=118$, $p=.101$).

SPAS posttest was not significant ($t=-1.52$, $df=118$, $p=.132$).

Dependent t-test showed there was no significant difference between pre/post test means for SPAS at the .05 level of significance.

Pre and Post Test Results on the Social Physique Anxiety Scale

Group	Pretest		Posttest	
	M	SD	M	SD
Experimental	19.35	6.42	18.48	6.39
Control	21.73	9.11	20.55	8.29

Question #3: Is there a significant difference in strength gains among participants receiving weight training?

Dependent t-test showed there was a significant difference between pre/post test means for strength gains in bench press, squats, push-ups, & sit-ups at the .05 level of significance.

Pre and Post Test Comparisons on Strength Tests

Test	Pretest		Posttest	
	M	SD	M	SD
Bench Press	157.31	68.98	172.75	66.91
Squats	217.94	89.06	244.81	86.34
Push-Ups	37.01	14.54	42.89	13.96
Sit-Ups	48.15	11.18	52.94	10.35

