Table, Supplemental Digital Content 3: Moderator analyses of primary and secondary outcomes.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Outcome |  | Group | BAa | 6M \*a | Timeb*p* | 6M adj. diff. in changec | 6M group-by-timed*p* | 12Ma | Timeb*p* | 12M adj. diff. in changec | 12M group-by-timed*p* |
| Moderator: Sex (F, n=304; M, n=303) |
| RTSQ (units) | F | INT | 36.0(33.9 to 38.2) | 38.5(36.3 to 40.7) | <0.001 | 2.8(1.1 to 4.5) | 0.001 | 35.7(33.5 to 37.9) | 0.626 | 0.5(-1.3 to 2.3) | 0.586 |
| CON | 34.5(32.0 to 37.1) | 34.1(31.5 to 36.7) | 0.550 | 33.7(31.1 to 36.4) | 0.262 |
| M | INT | 33.9(31.7 to 36.0) | 37.8(35.7 to 40.0) | <0.001 | 5.9(4.4 to 7.4) | <0.001 | 35.8(33.6 to 38.0) | <0.001 | 3.5(1.7 to 5.2) | <0.001 |
| CON | 36.3(33.6 to 39.0) | 34.4(31.7 to 37.1) | 0.005 | 34.7(32.0 to 37.5) | 0.029 |
| Moderator: SES (Low, n=177; Med, n=263; High, n=161) |
| Push-ups (reps) | Low | INT | 11.7(9.7 to 13.7) |  |  |  |  | 13.6(11.4 to 15.7) | 0.041 | 1.7(-0.6 to 3.9) | 0.147 |
| CON | 11.0(9.5 to 12.4) |  |  |  | 11.2(9.5 to 12.8) | 0.756 |
| Med | INT | 11.5(10.20 to 12.7) |  |  |  |  | 13.2(11.9 to 14.6) | 0.001 | 0.7(-1.3 to 2.6) | 0.501 |
| CON | 11.8(9.95 to 13.7) |  |  |  | 12.9(10.9 to 14.9) | 0.177 |
| High | INT | 14.7(13.3 to 16.2) |  |  |  |  | 17.1(15.7 to 18.6) | <0.001 | 2.1(-0.2 to 4.3) | 0.073 |
| CON | 11.1(9.1 to 13.1) |  |  |  | 11.4(9.3 to 13.5) | 0.716 |
| VO2 max (mL/[kg·min]) | Low | INT | 47.0(43.3 to 50.7) |  |  |  |  | 51.1(47.3 to 54.9) | <0.001 | 3.0(0.5 to 5.6) | 0.021 |
| CON | 47.7(44.5 to 50.8) |  |  |  | 48.8(45.6 to 52.0) | 0.145 |
| Med | INT | 47.9(45.6 to 50.2) |  |  |  |  | 49.7(47.3 to 52.0) | 0.002 | -1.0(-3.1 to 1.0) | 0.328 |
| CON | 48.4(45.6 to 51.3) |  |  |  | 51.3(48.3 to 54.2) | 0.001 |
| High | INT | 50.7(47.4 to 54.0) |  |  |  |  | 51.5(48.2 to 54.7) | 0.236 | -2.7(-4.9 to -0.5) | 0.018 |
| CON | 48.5(44.5 to 52.5) |  |  |  | 51.9(47.8 to 55.9) | <0.001 |
| RTSQ(units) | Low | INT | 32.5(30.8 to 34.2) |  |  |  |  | 33.20(31.3 to 35.1) | 0.445 | -0.4(-2.6 to 1.9) | 0.766 |
| CON | 34.3(33.0 to 35.6) |  |  | 35.3(33.8 to 36.8) | 0.162 |
| Med | INT | 33.4(32.3 to 34.5) |  |  |  |  | 35.3(34.1 to 36.6) | <0.001 | 4.4(2.3 to 6.4) | <0.001 |
| CON | 35.8(34.2 to 37.5) |  |  | 33.4(31.6 to 35.2) | 0.001 |
| High | INT | 37.7(36.4 to 39.0) |  |  |  |  | 37.4(36.2 to 38.7) | 0.680 | 3.4(1.0 to 5.7) | 0.005 |
| CON | 37.3(35.4 to 39.1) |  |  | 33.6(31.8 to 35.5) | <0.001 |
| Moderator: Baseline weight status (U/HW, n=435; OW/OB, n=165) |
| BMI (kg/m2) | U/HW | INT | 20.12(19.75 to 20.50) |  |  |  |  | 20.67(20.28 to 21.06) | <0.001 | -0.01(-0.20 to 0.18) | 0.951 |
| CON | 20.25(19.84 to 20.66) |  |  | 20.80(20.37 to 21.23) | <0.001 |
| OW/OB | INT | 27.20(26.28 to 28.12) |  |  |  |  | 27.24(26.29 to 28.19) | 0.788 | -0.55(-1.01 to -0.08) | 0.021 |
| CON | 27.98(27.01 to 28.95) |  |  | 28.57(27.57 to 29.58) | 0.001 |
| VO2 max (mL/[kg·min]) | U/HW | INT | 50.5(48.5 to 52.4) |  |  |  |  | 51.7(49.7 to 53.7) | 0.004 | -2.0(-3.4 to -0.6) | 0.005 |
| CON | 48.7(46.6 to 50.9) |  |  | 52.0(49.8 to 54.1) | <0.001 |
| OW/OB | INT | 45.1(42.2 to 47.9) |  |  |  |  | 48.0(45.1 to 51.0) | 0.001 | 2.9(0.2 to 5.5) | 0.032 |
| CON | 46.0(43.0 to 49.1) |  |  | 46.1(43.0 to 49.3) | 0.928 |
| RTSQ (units) | U/HW | INT | 35.8(34.2 to 37.4) | 38.4(36.8 to 40.1) | <0.001 | 3.6(2.3 to 4.9) | <0.001 | 36.1(34.5 to 37.7) | 0.513 | 1.4(-0.1 to 2.9) | 0.058 |
| CON | 36.1(34.4 to 37.8) | 35.2(33.4 to 36.9) | 0.108 | 35.0(33.2 to 36.7) | 0.059 |
| OW/OB | INT | 31.8(29.6 to 33.9) | 36.6(34.3 to 38.9) | <0.001 | 6.4(4.1 to 8.6) | <0.001 | 34.9(32.7 to 37.2) | <0.001 | 4.4(2.0 to 6.8) | <0.001 |
| CON | 33.4(31.1 to 35.7) | 31.9(29.4 to 34.3) | 0.077 | 32.2(29.8 to 34.7) | 0.200 |

Abbreviations: BA, Baseline; 6M, 6-month; 12M, 12-month; F, female; M, male; INT, intervention; CON, control; BMI, body mass index; MVPA, moderate-to-vigorous physical activity; VO2 max, maximal aerobic capacity; RTSQ, resistance training skill quotient; PA, physical activity; RT, resistance training; SES, socioeconomic status; Med, medium; U/HW, Under/Healthy Weight; OW/OB, overweight/obese.

\* For MVPA, accelerometer data was collected at 3-months rather than 6-months, to capture objective data during the intervention period.

aMean (95% confidence intervals).

b Within group change over time.

c Adjusted mean difference (95% confidence intervals) between Resistance Training for Teens intervention and control group at the specified timepoint (intervention minus control), with time and treatment included as fixed factors and school class included as a random effect.

d Group-by-time interaction from mixed model that included baseline and the specified timepoint.