Additional file Table1a Associations between changes in sedentary behavior or physical activity and potential determinants/moderators in boys

| Dependent variabes | Do you like sports or | Boys: $1: \mathrm{n}=24,2: \mathrm{n}=73$ |  |  |  | Are you good at sports or exercise? | Boys 1: $\mathrm{n}=10,2 \mathrm{e} \mathrm{n}=40,3: \mathrm{n}=48$ |  |  |  | How would you describe your body shape? | Boys: 1: $\mathrm{n}=9,2 \mathrm{n}$ : $\mathrm{=72}, 3: \mathrm{n}=17$ |  |  |  | Is your child healthy? | Boys: 1: $\mathrm{n}=54,2: \mathrm{n}=43$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Estimated | SE | B | P-value |  | Estimated | SE | B | P-value |  | $\begin{aligned} & \text { Estimated d } \\ & \text { mean } \end{aligned}$ | SE | B | P-value |  | $\begin{gathered} \text { Estimated } \\ \text { mean } \end{gathered}$ | SE | B | P-value |
| $\triangle$ Sedentary behavior (min/day) | 1. slighty dislike or like | 9.1 | 11.1 | -1.5 | 0.902 | 1. considerably and slighty lower skilled | -16.5 | 16.4 | -27.1 |  | 1. thin | 5.2 | 19.4 | -25.5 |  | 1 not healthy and healthy | -0.2 | 7.8 | -19.1 | 0.073 |
|  | 2. considerably like | 10.6 | 7.0 | 0.0 |  | 2. slighty highly skilled | 13.5 | 8.8 | 2.9 |  | 2. maintain the present body | 3.3 | 7.2 | -27.4 |  | 2 very healthy | 18.9 | 8.3 | 0.0 |  |
|  |  |  |  |  |  | 3. considerably highly skill | 10.6 | 8.4 | 0.0 |  | 3. overweight or obese | 30.7 | 16.1 | 0.0 |  |  |  |  |  |  |
|  | *1. slighty distike or like | 8.4 | 11.1 | 0.1 | 0.996 | *1. considerably and slighty lower skilled | -12.6 | 17.1 | -21.5 |  | *1. thin | 2.9 | 19.3 | -29.7 |  | ${ }^{1} 1$ not healthy and healthy | $-1.7$ | 7.9 | -18.6 | 0.080 |
|  | *2. considerably like | 8.3 | 7.2 | 0.0 |  | *2. slighty highly skilled | 11.7 | 9.1 | 2.8 |  | *2. maintain the present body | 0.7 | 7.4 | -32.0 |  | *2 very healthy | 16.9 | 8.4 | 0.0 |  |
|  | $\overline{\text { ALPA (min/day }}$ ( ${ }^{\text {a }}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ambulatory | 1. slighty disilike or like | -20.9 | 4.4 | -7.8 | 0.117 | 1. considerably and slighty lower skilled | -21.8 | 6.8 | -9.2 |  | 1. thin | -17.5 | 8.1 | 1.9 |  | 1 not healthy and healthy | $-9.8$ | 3.1 | 10.6 | 0.016 |
|  | 2. considerably like | -13.1 | 2.9 | 0.0 |  | 2. slighly highly skilled | -13.8 | 3.6 | -1.3 |  | 2. maintain the present body | -12.6 | 3.0 | 6.7 |  | 2 zery healthy | -20.4 | 3.5 | 0.0 |  |
|  |  |  |  |  |  | 3. considerably highly skill | -12.6 | 3.7 | 0.0 |  | 3. overweight or obese | -19.4 | 6.7 | 0.0 |  |  |  |  |  |  |
|  | *1. slighty disilike or like | -22.0 | 4.4 | -8.8 | 0.077 | *. considerably and slighty lower skilled | -24.7 | 6.9 | -12.9 |  | *1. thin | -17.7 | 8.1 | 0.6 |  | *1 not healthy and healthy | -9.9 | 3.2 | 10.5 | 0.017 |
|  | *2. considerably like | -13.2 | 2.9 | 0.0 |  | *2. slighly highly skilled | -14.6 | 3.6 | -2.7 |  | *2. maintain the present body | -13.3 | 3.1 | 5.1 |  | *2 very healthy | -20.5 | 3.5 | 0.0 |  |
|  |  |  |  |  |  | *3. considerably highly skill | -11.8 | 3.7 | 0.0 |  | *3. overweight or obese | -18.3 | 6.8 | 0.0 |  |  |  |  |  |  |
| Non-ambulatory | 1. sigighty dislike or like | -5.6 | 9.1 | 15.7 | 0.123 | 1. considerably and slighty lower skilled | 11.3 | 13.2 | 26.3 | 0.017 (1 VS 2) | 1. thin | 1.7 | 16.2 | 42.0 |  | 1 not healthy and healthy | -15.7 | 6.6 | 4.7 | 0.600 |
|  | 2. considerably like | -21.3 | 5.7 | 0.0 |  | 2. slighty highly skilled | -30.1 | 7.1 | -15.2 |  | 2. maintain the present body | -14.9 | 5.8 | 25.4 |  | 2 very healthy | -20.4 | 7.1 | 0.0 |  |
|  |  |  |  |  |  | 3. considerably highly skill | -14.9 | 6.8 | 0.0 |  | 3. overweight or obese | -40.3 | 13.5 | 0.0 |  |  |  |  |  |  |
|  | ${ }^{*}$ 1. slighty dislike or like | -5.1 | ${ }^{9.2}$ | 15.8 | 0.123 | *1. considerably and slighty lower skilled | 11.4 | 13.3 | 25.8 | 0.023 (1 VS 2) | *1. thin | 2.3 | 16.3 | 43.0 |  | ${ }^{*} 1$ not healthy and healthy | -15.0 | ${ }^{6.8}$ | 5.2 | 0.567 |
|  | *2. considerably like | -20.9 | 5.8 | 0.0 |  | *2. slightly highly skilled | -28.9 | 7.4 | -14.4 |  | *2. maintain the present body | -14.2 | ${ }^{6} .0$ | 26.5 |  | *2 very healthy | -20.2 | 7.1 | 0.0 |  |
|  |  |  |  |  |  | *3. considerably highly skill | -14.5 | 6.9 | 0.0 |  | *3. overweight or obese | -40.7 | 13.5 | 0.0 |  |  |  |  |  |  |
| Total | 1. slighty disilike or like | -27.0 | 10.9 | 7.9 | 0.512 | 1. considerably and slighty lower skilled | -10.3 | 15.8 | 18.2 |  | 1. thin | -15.9 | 18.9 | 43.8 |  | 1 not healthy and healthy | -25.7 | 7.6 | 15.6 | 0.140 |
|  | 2. considerably like | -34.9 | 6.9 | 0.0 |  | 2. slighty highly skilled | -44.3 | 8.5 | -15.8 |  | 2. maintain the present body | -28.0 | 6.9 | 31.8 |  | [2 very healthy | -41.3 | 8.3 | 0.0 |  |
|  |  |  |  |  |  | 3. considerably highly skill | -28.5 | 8.2 | 0.0 |  | 3. overweight or obese | -59.8 | 15.7 | 0.0 |  |  |  |  |  |  |
|  | *1. slighty dislike or like | -27.3 | 11.0 | 7.7 | 0.528 | *1. considerably and slighty lower skilled | -10.9 | 16.1 | 17.6 |  | *1. thin | -16.2 | 19.1 | 43.5 |  | *1 1 not healthy and healthy | -25.7 | 7.9 | 15.6 | 0.150 |
|  | *2. considerably like | -35.0 | 7.0 | 0.0 |  | *2. slighly highly skilled | -44.5 | ${ }^{8.6}$ | -16.1 |  | *2. maintain the present body | -28.2 | 7.0 | 31.5 |  | *2 very healthy | -41.3 | 8.4 | 0.0 |  |
|  |  |  |  |  |  | *3. considerably highly skill | -28.5 | 8.3 | 0.0 |  | *3. overweight or obese | -59.6 | 15.8 | 0.0 |  |  |  |  |  |  |
| $\overline{\text { MVPA (min/day) }}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ambulatory | 1. slighty disilike or like | -14.4 | 3.0 | ${ }^{-8.4}$ | 0.014 | 1. considerably and slighty lower skilled | -11.1 | 4.8 | -3.8 |  | 1. thin | -17.2 | 5.7 | -11.3 |  | 1 not healthy and healthy | -5.7 | 2.2 | 4.7 | 0.118 |
|  | 2. considerably like | -6.0 | 1.9 | 0.0 |  | 2. slighly highly skilled | -7.3 | 2.6 | 0.1 |  | 2. maintain the present body | -7.3 | 2.1 | -1.4 |  | 2 very healthy | -10.5 | 2.4 | 0.0 |  |
|  |  |  |  |  |  | 3. considerably highly skill | -7.4 | 2.5 | 0.0 |  | 3. overweight or obese | $-5.8$ | 4.7 | 0.0 |  |  |  |  |  |  |
|  | *1. lighty dislike or like | -15.5 | 3.0 | -9.2 | 0.006 | *1. considerably and slighty lower skilled | -13.6 | 4.9 | -6.4 |  | ${ }^{\text {*1. thin }}$ | -17.0 | 5.6 | -11.6 |  | ${ }^{*} 1$ not healthy and healthy | -6.2 | 2.2 | 4.5 | 0.136 |
|  | *2. considerably like | -6.3 | 1.9 | 0.0 |  | *2. slighly highly skilled | -7.5 | 2.6 | -0.3 |  | *2. maintain the present body | -7.8 | 2.1 | $-2.5$ |  | *2 very healthy | -10.7 | 2.4 | 0.0 |  |
|  |  |  |  |  |  | *3. considerably highly skill | -7.2 | 2.5 | 0.0 |  | *3. overweight or obese | -5.3 | 4.7 | 0.0 |  |  |  |  |  |  |
| Non-ambulatory | 1. slighty disilike or like | -0.4 | 1.5 | -1.1 | 0.511 | 1. considerably and slighty lower skilled | -1.1 | 2.2 | -2.8 |  | 1. thin | 2.5 | 2.6 | 7.7 |  | 1 not healthy and healthy | 0.0 | 1.1 | -1.0 | 0.480 |
|  | 2. considerably like | 0.7 | 1.0 | 0.0 |  | 2. slighty highly skilled | -0.4 | 1.2 | -2.1 |  | 2. maintain the present body | 1.8 | 1.0 | 7.0 | 0.014 (2 vs 3) | 2 very healthy | 1.1 | 1.2 | 0.0 |  |
|  |  |  |  |  |  | 3. considerably highly skill | 1.7 | 1.2 | 0.0 |  | 3. overweight or obese | -5.2 | 2.1 | 0.0 |  |  |  |  |  |  |
|  | *1. slighty dislike or like | -0.4 | 1.5 | -1.1 | 0.526 | *1. considerably and slighty lower skilled | -1.5 | 2.2 | -3.1 |  | ${ }^{*}$ 1. thin | 2.5 | 2.6 | 7.5 |  | ${ }^{*} 1$ not healthy and healthy | 0.0 | 1.1 | -1.0 | 0.483 |
|  | *2. considerably like | 0.6 | 1.0 | 0.0 |  | *2. slighty highly skilled | -0.4 | 1.2 | -2.0 |  | *2. maintain the present body | 1.7 | 1.0 | 6.7 | 0.021 (2 vs 3) | *2 very healthy | 1.0 | 1.2 | 0.0 |  |
|  |  |  |  |  |  | *3. considerably highly skill | 1.7 | 1.2 | 0.0 |  | *3. overweight or obese | -5.0 | 2.2 | 0.0 |  |  |  |  |  |  |
| Total | 1. slighty disilike or like | -14.9 | 3.7 | $-9.4$ | 0.025 | 1. considerably and slighty lower skilled | -12.1 | 5.8 | -6.3 |  | 1. thin | -14.5 | 7.0 | -3.5 |  | 1 not healthy and healthy | -5.7 | 2.8 | 3.8 | 0.314 |
|  | 2. considerably like | -5.5 | 2.4 | 0.0 |  | 2. slighly highly skilled | -7.5 | 3.2 | -1.7 |  | 2. maintain the present body | -5.4 | 2.7 | 5.6 |  | 2 very healthy | -9.5 | 3.0 | 0.0 |  |
|  |  |  |  |  |  | 3. considerably highly skill | -5.8 | 3.1 | 0.0 |  | 3. overweight or obese | -11.0 | 5.8 | 0.0 |  |  |  |  |  |  |
|  | *1. slighty dislike or like | -15.7 | 3.7 | -10.3 | 0.013 | *1. considerably and slighty lower skilled | -15.8 | 5.9 | -10.5 |  | *1. thin | -14.2 | 6.9 | -3.6 |  | ${ }^{*} 1$ not healthy and healthy | -6.0 | 2.8 | 3.5 | 0.347 |
|  | *2. considerably like | -5.4 | 2.4 | 0.0 |  | *2. slighty highly skilled | $-7.2$ | 3.2 | $-2.0$ |  | *2. maintain the present body | $-5.8$ | 2.6 | 4.8 |  | *2 very healthy | $-9.5$ | 3.0 | 0.0 |  |
|  |  |  |  |  |  | *3. considerably highly skill | -5.3 | 3.0 | 0.0 |  | *3. overweight or obese | -10.6 | 5.8 | 0.0 |  |  |  |  |  |  |
| $\triangle \mathrm{MPA}(\min / \mathrm{day})$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ambulatory | 1. slighty disilike or like | -11.2 | 2.7 | -0.6 | 0.023 | 1. considerably and slighty lower skilled | -8.6 | 4.2 | -3.2 |  | 1. thin | -14.2 | 5.0 | -10.6 |  | 1 not healthy and healthy | -3.9 | 2.0 | 4.2 | 0.119 |
|  | 2. considerably like | -4.3 | 1.7 | 0.0 |  | 2. slighty highly skilled | -5.1 | 2.3 | 0.3 |  | 2. maintain the present body | -5.3 | 1.9 | -1.7 |  | 2 very healthy | -8.1 | 2.1 | 0.0 |  |
|  |  |  |  |  |  | 3. considerably highly skill | -5.4 | 2.2 | 0.0 |  | 3. overweight or obese | -3.6 | 4.2 | 0.0 |  |  |  |  |  |  |
|  | *1. slighty dislike or like | -12.0 | 2.6 | -7.6 | 0.012 | *1. considerably and slighty lower skilled | -10.5 | 4.4 | -5.3 |  | *1. thin | -14.0 | 5.0 | -10.7 |  | ${ }^{*} 1$ not healthy and healthy | $-4.2$ | 2.0 | 4.0 | 0.138 |
|  | *2. considerably like | -4.4 | 1.7 | 0.0 |  | ${ }^{*}$. slightly highly skilled | -5.3 | 2.3 | -0.1 |  | *2. maintain the present body | -5.7 | 1.9 | $-2.4$ |  | *2 very healthy | -8.2 | 2.1 | 0.0 |  |
|  |  |  |  |  |  | *3. considerably highly skill | -5.3 | 2.2 | 0.0 |  | *3. overweight or obese | -3.3 | 4.1 | 0.0 |  |  |  |  |  |  |
| Non-ambulatory | 1. slighty dislike or like | 0.5 | 1.5 | 0.6 | 0.696 | 1. considerably and slighty lower skilled | -0.5 | 2.2 | $-2.5$ |  | 1. thin | 2.9 | 2.5 | ${ }^{7.8}$ |  | 1 not healthy and healthy | 0.6 | 1.1 | 0.9 | 0.522 |
|  | 2. considerably like | 1.1 | 0.9 | 0.0 |  | 2. slightly highly skilled | 0.2 | 1.2 | $-1.8$ |  | 2. maintain the present body | 2.3 | 0.9 | 7.3 | 0.008 (2 VS 3) | 2 very healthy | 1.5 | 1.1 | 0.0 |  |
|  |  |  |  |  |  | 3. considerably highly skill | 2.0 | 1.1 | 0.0 |  | 3. overweight or obese | -4.9 | 2.1 | 0.0 |  |  |  |  |  |  |
|  | ${ }^{*}$ 1. slighty dislike or like | 0.5 | 1.5 | -0.6 | 0.715 | *1. considerably and slighty lower skilled | -0.7 | 2.2 | $-2.7$ |  | ${ }^{*} 1$. thin | 2.9 | 2.5 | 7.8 |  | ${ }^{*} 1$ not healthy and healthy | 0.5 | 1.1 | -0.9 | 0.517 |
|  | *2. considerably like | 1.1 | 0.9 | 0.0 |  | ${ }^{*}$ 2. slighty highly skilled | 0.2 | 1.2 | $-1.7$ |  | ${ }^{*}$ *. maintain the present body | 2.3 | 0.9 | 7.2 | 0.010 (2 VS 3) | *2 very healthy | 1.5 | 1.1 | 0.0 |  |
|  |  |  |  |  |  | *3. considerably highly skill | 2.0 | 1.1 | 0.0 |  | *3. overweight or obese | -4.9 | 2.1 | 0.0 |  |  |  |  |  |  |
| Total | 1. slighty disilike or like | -10.9 | 3.4 | -7.3 | 0.051 | 1. considerably and slighty lower skilled | -8.8 | 5.1 | -5.2 |  | 1. thin | -11.4 | 6.2 | -2.5 |  | 1 not healthy and healthy | ${ }^{-3.6}$ | 2.5 | 3.3 | ${ }^{0.327}$ |
|  | 2. considerably like | -3.6 | 2.2 | 0.0 |  | 2. slighly highly skilled | -5.1 | 2.9 | -1.5 |  | 2. maintain the present body | -3.1 | 2.3 | 5.9 |  | 2 very healthy | -6.8 | 2.7 | 0.0 |  |
|  |  |  |  |  |  | 3. considerably highly skill | ${ }^{-3.6}$ | 2.7 | 0.0 |  | 3. overweight or obese | -8.9 | 5.1 | 0.0 |  |  |  |  |  |  |
|  | *1. slighty dislike or like | -11.4 | 3.3 | -7.9 | 0.033 | *1. considerably and slighty lower skilled | -11.8 | 5.3 | -8.6 |  | ${ }^{*}$ 1. thin | -11.0 | 6.1 | $-2.4$ |  | *1 1 not healthy and healthy | -4.1 | 2.5 | 3.6 | 0.291 |
|  | *2. considerably like | -3.5 | 2.1 | 0.0 |  | ${ }^{*}$ *. slightly highly skilled | -4.8 | 2.8 | $-1.6$ |  | *2. maintain the present body | ${ }^{-3.3}$ | ${ }^{2.3}$ | 5.3 |  | *2 very healthy | -7.7 | 2.7 | 0.0 |  |
|  |  |  |  |  |  | *3. considerably highly skill | -3.2 | 2.7 | 0.0 |  | *3. overweight or obese | -8.6 | 5.1 | 0.0 |  |  |  |  |  |  |
| $\triangle$ Step count (steps/day) | 1. slighty disilike or like | -2883 | 601 | -1399 | 0.042 | 1. considerably and slighty lower skilled | -2664 | 953 | -1089 |  | 1. thin | -2461 | 1143 | -349 |  | 1 not healthy and healthy | -1201 | 440 | 1322 | ${ }^{0.030}$ |
|  | 2. considerably like | $-1483$ | 397 | 0 |  | 2. slightly highly skilled | $-1661$ | 513 | $-86$ |  | 2. maintain the present body | $-1592$ | 425 | 521 |  | 2 very healthy | $-2523$ | 487 | 0 |  |
|  |  |  |  |  |  | 3. considerably highly skill | $-1576$ |  | $0$ | - | 3. overweight or obese | -2113 |  | $0$ |  |  |  |  |  |  |

LPA: Light physical activity, MVPA: moderate-to-vigorous physical activiver
sedentary behavior or moderate-to-vigorous physical activity at baseline.

