Supplementary Table 3 – Accelerometer estimated MVPA and total SB and association with BMI and WC Z-scores by sex, race and household income levels

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **Body Mass Index (BMI) Z-score Percentiles** | | | | | | | | |
| **Group** | **Exposure** |  | **5th** | **10th** | **15th** | **25th** | **50th** | **75th** | **85th** | **90th** | **95th** |
| Male | MVPA | Beta | -0.02 | -0.02 | -0.04 | -0.08 | -0.21 | -0.38 | -0.41 | -0.40 | -0.45 |
|  |  | SE | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.04 | 0.06 | 0.05 | 0.07 |
|  |  | *P*-value | 0.436 | 0.301 | 0.071 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Female | MVPA | Beta | 0.01 | -0.04 | -0.08 | -0.09 | -0.15 | -0.32 | -0.30 | -0.32 | -0.34 |
|  |  | SE | 0.04 | 0.04 | 0.03 | 0.03 | 0.04 | 0.06 | 0.07 | 0.09 | 0.10 |
|  |  | *P*-value | 0.734 | 0.257 | 0.008 | 0.003 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Male | Total SB | Beta | 0.00 | 0.00 | 0.00 | -0.01 | -0.02 | -0.05 | -0.05 | -0.02 | -0.03 |
|  |  |  | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.03 | 0.03 | 0.04 |
|  |  | *P*-value | 0.695 | 0.640 | 0.952 | 0.447 | 0.075 | 0.028 | 0.142 | 0.574 | 0.384 |
| Female | Total SB | Beta | -0.01 | -0.01 | -0.01 | -0.01 | 0.00 | -0.02 | 0.01 | -0.02 | -0.04 |
|  |  | SE | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.03 | 0.03 |
|  |  | *P*-value | 0.633 | 0.357 | 0.080 | 0.283 | 0.874 | 0.280 | 0.822 | 0.418 | 0.277 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| White | MVPA | Beta | 0.02 | -0.01 | -0.03 | -0.06 | -0.15 | -0.29 | -0.33 | -0.34 | -0.32 |
|  |  | SE | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.04 | 0.04 | 0.05 | 0.07 |
|  |  | *P*-value | 0.741 | 0.100 | 0.007 | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Non-white | MVPA | Beta | -0.04 | -0.05 | -0.09 | -0.16 | -0.32 | -0.52 | -0.59 | -0.59 | -0.63 |
|  |  | SE | 0.04 | 0.04 | 0.04 | 0.04 | 0.05 | 0.08 | 0.1 | 0.09 | 0.08 |
|  |  | *P*-value | 0.324 | 0170 | 0.016 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| White | Total SB | Beta | -0.01 | -0.01 | -0.01 | 0.00 | 0.00 | -0.01 | -0.01 | 0.02 | 0.00 |
|  |  | SE | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.03 |
|  |  | *P*-value | 0333 | 0.408 | 0.354 | 0.529 | 0.920 | 0.566 | 0.596 | 0.358 | 0.900 |
| Non-white | Total SB | Beta | 0.00 | -0.01 | -0.01 | -0.03 | -0.04 | -0.08 | -0.08 | -0.09 | -0.09 |
|  |  | SE | 0.02 | 0.01 | 0.01 | 0.01 | 0.02 | 0.03 | 0.04 | 0.04 | 0.04 |
|  |  | *P*-value | 0.818 | 0.522 | 0.494 | 0.054 | 0.020 | 0.006 | 0.049 | 0.039 | 0.032 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Income Q1 | MVPA | Beta | -0.03 | -0.05 | -0.09 | -0.14 | -0.26 | -0.38 | -0.29 | -0.31 | -0.47 |
|  |  | SE | 0.04 | 0.04 | 0.04 | 0.05 | 0.05 | 0.1 | 0.12 | 0.12 | 0.13 |
|  |  | *P*-value | 0.517 | 0.173 | 0.016 | 0.003 | <0.001 | <0.001 | 0.011 | 0.009 | <0.001 |
| Income Q2 | MVPA | Beta | -0.02 | -0.04 | -0.04 | -0.08 | -0.20 | -0.36 | -0.41 | -0.47 | -0.49 |
|  |  | SE | 0.04 | 0.03 | 0.03 | 0.03 | 0.05 | 0.06 | 0.08 | 0.1 | 0.13 |
|  |  | *P*-value | 0.705 | 0.251 | 0.203 | 0.012 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Income Q3 | MVPA | Beta | -0.03 | 0.00 | 0.00 | -0.05 | -0.14 | -0.33 | -0.37 | -0.42 | -0.49 |
|  |  | SE | 0.05 | 0.03 | 0.03 | 0.03 | 0.05 | 0.06 | 0.07 | 0.08 | 0.11 |
|  |  | *P*-value | 0.524 | 0.916 | 0.900 | 0.164 | 0.005 | <0.001 | <0.001 | <0.001 | <0.001 |
| Income Q4 | MVPA | Beta | 0.03 | -0.03 | -0.07 | -0.05 | -0.15 | -0.35 | -0.37 | -0.36 | -0.27 |
|  |  | SE | 0.03 | 0.03 | 0.02 | 0.03 | 0.04 | 0.06 | 0.07 | 0.09 | 0.15 |
|  |  | *P*-value | 0.313 | 0.353 | 0.002 | 0.139 | <0.001 | <0.001 | <0.001 | <0.001 | 0.071 |
| Income Q1 | Total SB | Beta | -0.01 | 0.01 | 0.00 | -0.02 | -0.01 | -0.02 | 0.00 | -0.01 | -0.04 |
|  |  | SE | 0.02 | 0.01 | 0.02 | 0.02 | 0.02 | 0.03 | 0.05 | 0.05 | 0.05 |
|  |  | *P*-value | 0.725 | 0.584 | 0.859 | 0.340 | 0.805 | 0.486 | 0.945 | 0.839 | 0.415 |
| Income Q2 | Total SB | Beta | -0.02 | -0.01 | -0.02 | -0.03 | -0.02 | -0.02 | -0.03 | -0.02 | -0.03 |
|  |  | SE | 0.02 | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.03 | 0.04 | 0.04 |
|  |  | *P*-value | 0.287 | 0.352 | 0.144 | 0.043 | 0.217 | 0.185 | 0.306 | 0.650 | 0.479 |
| Income Q3 | Total SB | Beta | 0.00 | -0.01 | 0.00 | 0.01 | 0.00 | -0.03 | -0.03 | -0.03 | -0.06 |
|  |  | SE | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.03 | 0.04 | 0.04 | 0.06 |
|  |  | *P*-value | 0.918 | 0.645 | 0.848 | 0.534 | 0.929 | 0.310 | 0.489 | 0.389 | 0.269 |
| Income Q4 | Total SB | Beta | 0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.05 | -0.06 | -0.06 | -0.02 |
|  |  | SE | 0.02 | 0.01 | 0.01 | 0.01 | 0.02 | 0.03 | 0.03 | 0.04 | 0.06 |
|  |  | *P*-value | 0.770 | 0.503 | 0.225 | 0.628 | 0.466 | 0.113 | 0.076 | 0.142 | 0.769 |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | **Waist Circumference (WC) Z-score Percentiles** | | | | | | | | |
|  |  |  | **5th** | **10th** | **15th** | **25th** | **50th** | **75th** | **85th** | **90th** | **95th** |
| Male | MVPA | Beta | 0.02 | -0.03 | -0.04 | -0.07 | -0.18 | -0.41 | -0.44 | -0.41 | -0.40 |
|  |  | SE | 0.03 | 0.02 | 0.02 | 0.02 | 0.03 | 0.04 | 0.06 | 0.07 | 0.06 |
|  |  | *P*-value | 0.506 | 0.139 | 0.052 | 0.002 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Female | MVPA | Beta | 0.06 | 0.00 | -0.02 | -0.10 | -0.19 | -0.23 | -0.30 | -0.28 | -0.40 |
|  |  | SE | 0.04 | 0.03 | 0.03 | 0.03 | 0.03 | 0.07 | 0.08 | 0.09 | 0.11 |
|  |  | *P*-value | 0.125 | 0.896 | 0.421 | <0.001 | 0.003 | <0.001 | <0.001 | <0.001 | <0.001 |
| Male | Total SB | Beta | 0.02 | 0.01 | 0.01 | 0.02 | 0.01 | -0.05 | -0.02 | 0.01 | 0.01 |
|  |  | SE | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.03 | 0.04 | 0.03 |
|  |  | *P*-value | 0.060 | 0.180 | 0.370 | 0.130 | 0.271 | 0.024 | 0.592 | 0.729 | 0.666 |
| Female | Total SB | Beta | 0.02 | 0.02 | 0.02 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | -0.04 |
|  |  | SE | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.03 | 0.03 | 0.03 |
|  |  | *P*-value | 0.124 | 0.212 | 0.065 | 0.433 | 0.996 | 0.618 | 0.827 | 0.972 | 0.278 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| White | MVPA | Beta | 0.02 | 0.00 | -0.03 | -0.05 | -0.14 | -0.27 | -0.32 | -0.28 | -0.33 |
|  |  | SE | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 | 0.04 | 0.05 | 0.06 | 0.06 |
|  |  | *P*-value | 0.421 | 0.836 | 0.132 | 0.020 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Non-white | MVPA | Beta | -0.06 | -0.04 | -0.08 | -0.14 | -0.36 | -0.61 | -0.72 | -0.62 | -0.54 |
|  |  | SE | 0.04 | 0.04 | 0.03 | 0.04 | 0.05 | 0.09 | 0.11 | 0.11 | 0.1 |
|  |  | *P*-value | 0.191 | 0.270 | 0.021 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| White | Total SB | Beta | 0.02 | 0.02 | 0.01 | 0.01 | 0.02 | -0.01 | 0.00 | 0.01 | 0.03 |
|  |  | SE | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.03 | 0.03 |
|  |  | *P*-value | 0.039 | 0.065 | 0.109 | 0.096 | 0.019 | 0.510 | 0.879 | 0.695 | 0.279 |
| Non-white | Total SB | Beta | 0.00 | 0.00 | -0.01 | 0.00 | -0.03 | -0.04 | -0.04 | -0.04 | -0.03 |
|  |  | SE | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.04 | 0.04 | 0.04 | 0.04 |
|  |  | *P*-value | 0.904 | 0.781 | 0.510 | 0.967 | 0.153 | 0.252 | 0.298 | 0.406 | 0.407 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Income Q1 | MVPA | Beta | -0.06 | -0.08 | -0.10 | -0.15 | -0.30 | -0.38 | -0.31 | -0.24 | -0.25 |
|  |  | SE | 0.05 | 0.05 | 0.04 | 0.05 | 0.05 | 0.08 | 0.13 | 0.13 | 0.16 |
|  |  | *P*-value | 0.258 | 0.131 | 0.013 | 0.004 | <0.001 | <0.001 | 0.015 | 0.057 | 0.103 |
| Income Q2 | MVPA | Beta | 0.02 | 0.01 | -0.02 | -0.08 | -0.23 | -0.36 | -0.46 | -0.41 | -0.42 |
|  |  | SE | 0.05 | 0.03 | 0.03 | 0.04 | 0.05 | 0.07 | 0.1 | 0.11 | 0.1 |
|  |  | *P*-value | 0.701 | 0.768 | 0.530 | 0.043 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Income Q3 | MVPA | Beta | 0.00 | -0.01 | -0.04 | -0.06 | -0.15 | -0.32 | -0.36 | -0.38 | -0.44 |
|  |  | SE | 0.05 | 0.04 | 0.03 | 0.04 | 0.04 | 0.06 | 0.08 | 0.09 | 0.1 |
|  |  | *P*-value | 0.992 | 0.765 | 0.215 | 0.101 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Income Q4 | MVPA | Beta | 0.01 | -0.02 | -0.02 | -0.03 | -0.13 | -0.30 | -0.32 | -0.35 | -0.25 |
|  |  | SE | 0.04 | 0.04 | 0.03 | 0.04 | 0.04 | 0.06 | 0.08 | 0.09 | 0.13 |
|  |  | *P*-value | 0.819 | 0.580 | 0.605 | 0.435 | <0.001 | <0.001 | <0.001 | <0.001 | 0.059 |
| Income Q1 | Total SB | Beta | 0.01 | 0.00 | 0.00 | -0.01 | -0.01 | 0.00 | 0.05 | 0.07 | 0.07 |
|  |  | SE | 0.02 | 0.02 | 0.01 | 0.02 | 0.02 | 0.04 | 0.05 | 0.05 | 0.06 |
|  |  | *P*-value | 0.652 | 0.916 | 0.811 | 0.489 | 0.639 | 0.915 | 0.329 | 0.135 | 0.238 |
| Income Q2 | Total SB | Beta | 0.01 | 0.01 | 0.01 | 0.00 | 0.01 | -0.02 | -0.04 | -0.03 | -0.01 |
|  |  | SE | 0.02 | 0.01 | 0.01 | 0.02 | 0.02 | 0.03 | 0.04 | 0.04 | 0.03 |
|  |  | *P*-value | 0.423 | 0.442 | 0.277 | 0.816 | 0.600 | 0.485 | 0.256 | 0.535 | 0.800 |
| Income Q3 | Total SB | Beta | 0.03 | 0.02 | 0.01 | 0.01 | 0.00 | -0.02 | -0.01 | 0.01 | 0.01 |
|  |  | SE | 0.02 | 0.02 | 0.02 | 0.01 | 0.02 | 0.03 | 0.04 | 0.04 | 0.05 |
|  |  | *P*-value | 0.036 | 0.134 | 0.435 | 0.315 | 0.986 | 0.534 | 0.800 | 0.847 | 0.827 |
| Income Q4 | Total SB | Beta | 0.03 | 0.03 | 0.02 | 0.02 | 0.01 | -0.01 | -0.06 | -0.04 | -0.04 |
|  |  | SE | 0.02 | 0.01 | 0.01 | 0.01 | 0.02 | 0.03 | 0.04 | 0.04 | 0.05 |
|  |  | *P*-value | 0.036 | 0.021 | 0.156 | 0.118 | 0.508 | 0.705 | 0.116 | 0.340 | 0.353 |

Abbreviations: MVPA, moderate-to-vigorous physical activity; SB, sedentary behavior; SE, standard error (estimated from 100 bootstrap samples). MVPA and total SB were included in the same model along with the covariates age, race, household income and accelerometer wear time, when not used to stratify the analyses, and year and study.