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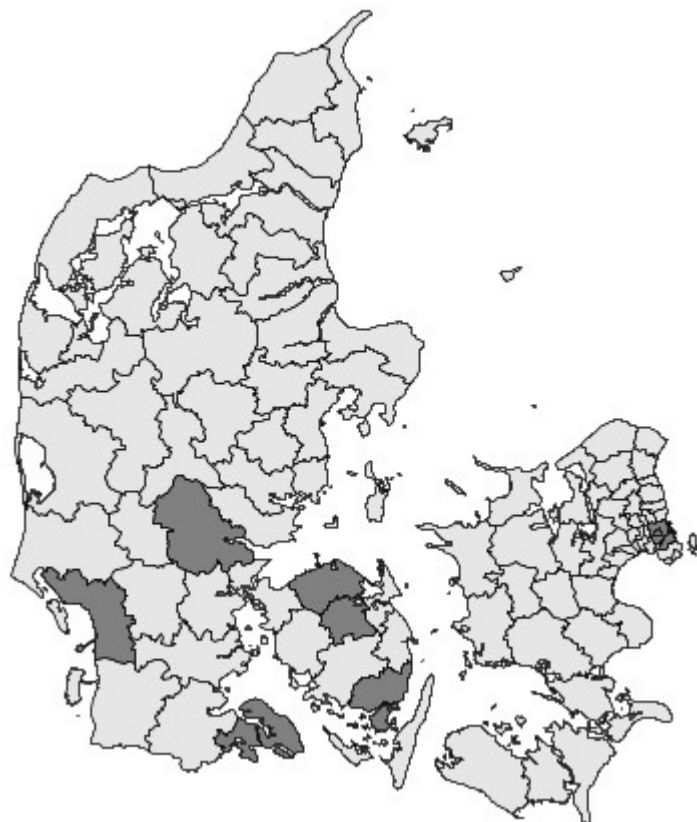
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## Supplementary material 1: Geographical representation



In the map all Danish municipalities are marked. The dark grey municipalities are included in the study.

## Supplementary material 2: Crude pre- and post-policy means

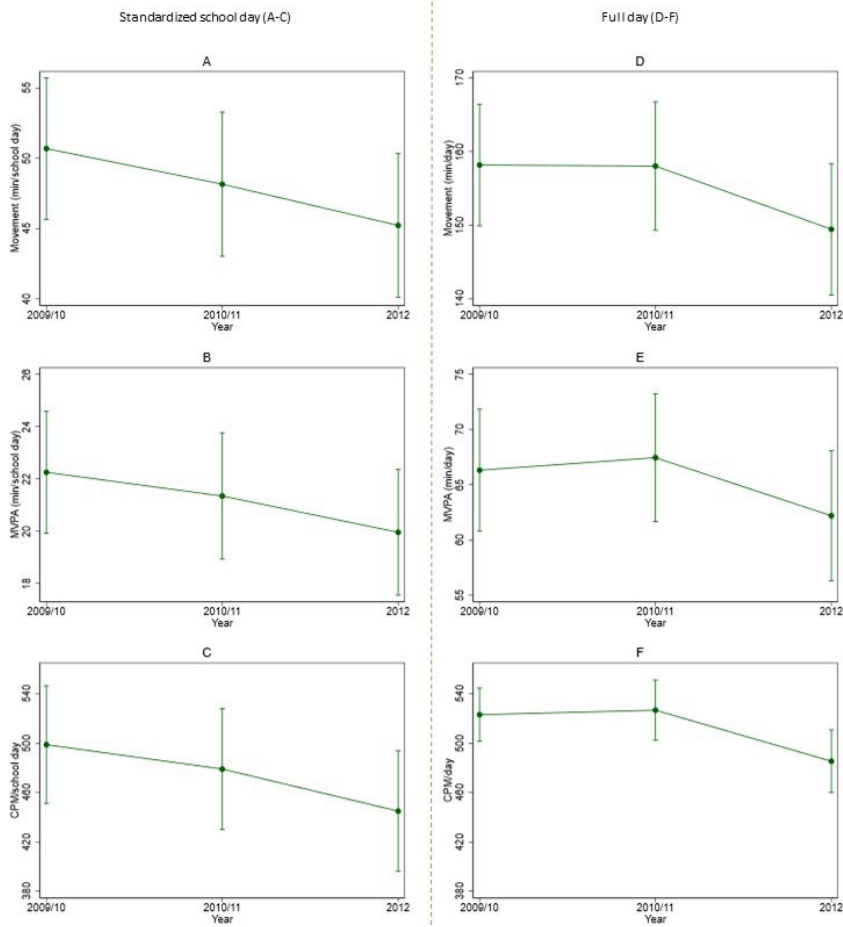
Table 1 Pre- and post-policy means and standard deviations

|  |                    | <b>Pre-policy</b> | <b>Post-policy</b> |
|--|--------------------|-------------------|--------------------|
|  |                    | Mean (SD)         | Mean (SD)          |
| <b>Standardized school-time<br/>(8:10am-1pm)</b> | Movement (minutes) | 50.2 (25.2)       | 53.7 (27.2)        |
|  | MVPA (minutes)     | 22.0 (15.5)       | 23.6 (15.7)        |
|  | CPM                | 493.0 (291.0)     | 523.9 (298.5)      |
| <b>Full day</b>                                  | Movement (minutes) | 157.4 (57.7)      | 149.2 (56.2)       |
|  | MVPA (minutes)     | 66.1 (35.1)       | 63.0 (32.9)        |
|  | CPM                | 519.7 (233.3)     | 480.1 (217.5)      |

SD: standard deviation. MVPA: moderate to vigorous physical activity. CPM: Mean counts per minute.

## Supplementary material 3: Additional figures

Figure 1 Marginal means with 95% CI of pre-policy movement, MVPA and CPM during a standardized school day (A-C) and a full day (D-F)



MVPA: Moderate to vigorous physical activity. CPM: Counts per minute

Figure 2 Pre- and post-policy movement during a standardized school day stratified into two school levels

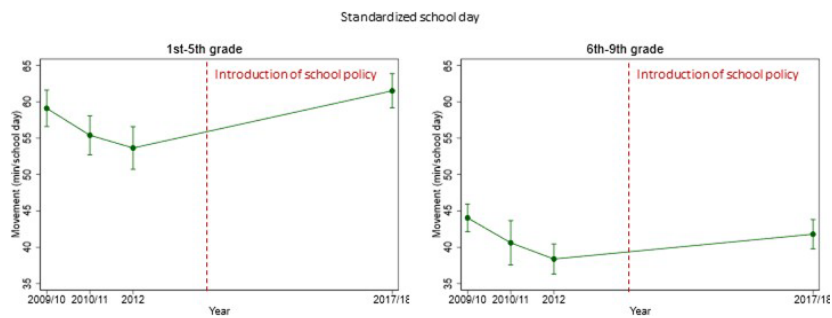
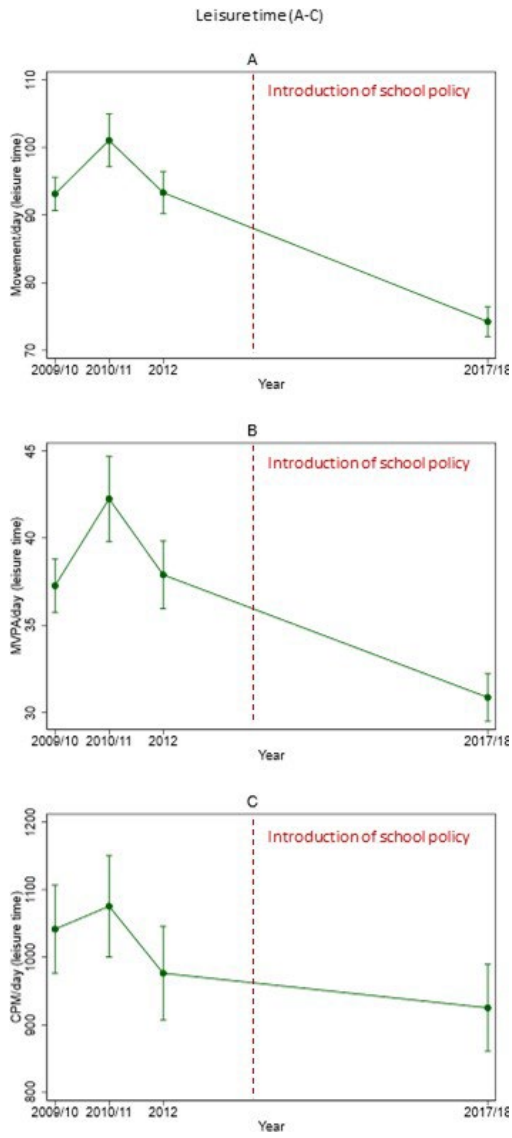


Figure 3 Marginal means of pre- and post-policy movement, MVPA and CPM during leisure-time



MVPA: Moderate to vigorous physical activity. CPM: Counts per minute

## Supplementary material 4: Full mixed effect linear regression models for main outcome (movement / standardized school day)

Pre-policy models:

Table 1: Mixed effect linear regression analysis on pre-policy movement (min/school day) during a standardized school day

| movement_min          | Coef.  | St.Err. | t-value          | p-value | [95% Conf | Interval] | Sig |
|-----------------------|--------|---------|------------------|---------|-----------|-----------|-----|
| : base 2009/10        | 0      | .       | .                | .       | .         | .         | .   |
| 2010/11               | -2.529 | .659    | -3.84            | 0       | -3.819    | -1.238    | *** |
| 2012                  | -5.464 | .559    | -9.77            | 0       | -6.561    | -4.368    | *** |
| : base Girl           | 0      | .       | .                | .       | .         | .         | .   |
| boy                   | 12.307 | .475    | 25.88            | 0       | 11.375    | 13.239    | *** |
| age                   | -3.977 | .202    | -19.66           | 0       | -4.374    | -3.581    | *** |
| : base Spring/summer  | 0      | .       | .                | .       | .         | .         | .   |
| Fall/winter           | 2.321  | .816    | 2.84             | .004    | .721      | 3.921     | *** |
| Constant              | 93.076 | 3.678   | 25.31            | 0       | 85.867    | 100.284   | *** |
| Random effects:       |        |         |                  |         |           |           |     |
| Project               | 22.738 | 18.085  |                  |         | 4.783     | 108.090   |     |
| School                | 19.755 | 6.922   |                  |         | 9.941     | 39.257    |     |
| Individual identifier | 56.113 | 3.854   |                  |         | 49.045    | 64.198    |     |
| Mean dependent var    |        | 50.175  | SD dependent var |         |           | 25.231    |     |
| Number of obs         |        | 14992   | Chi-square       |         |           | 1936.583  |     |
| Prob > chi2           |        | 0.000   |                  |         |           |           |     |

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$ . Highlighted coefficients are reported in the article

Table 2: Mixed effect linear regression analysis on pre-policy movement (min/school day) in 1<sup>st</sup> – 5<sup>th</sup> grade children during a standardized school day

| movement_min          | Coef.   | St.Err. | t-value          | p-value | [95% Conf | Interval] | Sig |
|-----------------------|---------|---------|------------------|---------|-----------|-----------|-----|
| : base 2009/10        | 0       | .       | .                | .       | .         | .         | .   |
| 2010/11               | -.705   | .868    | -0.81            | .417    | -2.407    | .997      |     |
| 2012                  | -4.356  | 1.028   | -4.24            | 0       | -6.37     | -2.341    | *** |
| : base Girl           | 0       | .       | .                | .       | .         | .         | .   |
| boy                   | 12.672  | .674    | 18.81            | 0       | 11.351    | 13.992    | *** |
| age                   | -2.645  | .308    | -8.59            | 0       | -3.248    | -2.041    | *** |
| : base Spring/summer  | 0       | .       | .                | .       | .         | .         | .   |
| Fall/winter           | 4.532   | 1.09    | 4.16             | 0       | 2.395     | 6.668     | *** |
| Constant              | 79.841  | 4.001   | 19.95            | 0       | 71.999    | 87.683    | *** |
| Random effects:       |         |         |                  |         |           |           |     |
| Project               | 3.5e-09 | 9.0e-08 |                  |         | 7.8e-30   | 1.6+e14   |     |
| School                | 54.648  | 21.071  |                  |         | 25.666    | 116.355   |     |
| Individual identifier | 49.804  | 5.479   |                  |         | 40.145    | 61.787    |     |
| Mean dependent var    |         | 58.227  | SD dependent var |         |           | 24.276    |     |
| Number of obs         |         | 7222    | Chi-square       |         |           | 588.554   |     |
| Prob > chi2           |         | 0.000   |                  |         |           |           |     |

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$ . Highlighted coefficients are reported in the article

Table 3: Mixed effect linear regression analysis on pre-policy movement (min/school day) in 6<sup>th</sup> – 9<sup>th</sup> grade children during a standardized school day

| movement_min          | Coef.   | St.Err. | t-value          | p-value | [95% Conf | Interval] | Sig |
|-----------------------|---------|---------|------------------|---------|-----------|-----------|-----|
| : base 2009/10        | 0       | .       | .                | .       | .         | .         | .   |
| 2010/11               | -4.83   | 1.471   | -3.28            | .001    | -7.713    | -1.948    | *** |
| 2012                  | -5.59   | .726    | -7.70            | 0       | -7.012    | -4.168    | *** |
| : base Girl           | 0       | .       | .                | .       | .         | .         | .   |
| boy                   | 12.426  | .601    | 20.69            | 0       | 11.249    | 13.603    | *** |
| age                   | -6.387  | .362    | -17.65           | 0       | -7.096    | -5.678    | *** |
| : base Spring/summer  | 0       | .       | .                | .       | .         | .         | .   |
| Fall/winter           | -3.928  | 1.983   | -1.98            | .048    | -7.814    | -.042     | **  |
| Constant              | 129.281 | 5.161   | 25.05            | 0       | 119.166   | 139.396   | *** |
| Random effects:       |         |         |                  |         |           |           |     |
| Project               | 6.6e-11 | 1.7e-09 |                  |         | 6.8e-32   | 6.3e+12   |     |
| School                | 35.754  | 10.150  |                  |         | 20.470    | 62.345    |     |
| Individual identifier | 62.323  | 5.417   |                  |         | 52.561    | 73.900    |     |
| Mean dependent var    |         | 42.690  | SD dependent var |         |           | 23.755    |     |
| Number of obs         |         | 7770    | Chi-square       |         |           | 1176.368  |     |
| Prob > chi2           |         | 0.000   |                  |         |           |           |     |

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$ . Highlighted coefficients are reported in the article

## Pre- and post-policy models:

Table 4: Mixed effect linear regression analysis on pre- and post-policy movement (min/school day) during a standardized school day

| movement_min          | Coef.   | St.Err. | t-value          | p-value | [95% Conf | Interval] | Sig |
|-----------------------|---------|---------|------------------|---------|-----------|-----------|-----|
| : base 2009/10        | 0       | .       | .                | .       | .         | .         | .   |
| 2010/11               | -3.905  | .577    | -6.77            | 0       | -5.036    | -2.774    | *** |
| 2012                  | -4.24   | .461    | -9.20            | 0       | -5.144    | -3.336    | *** |
| 2017/18               | .359    | .469    | 0.76             | .444    | -.56      | 1.278     |     |
| : base Girl           | 0       | .       | .                | .       | .         | .         | .   |
| boy                   | 13.521  | .383    | 35.33            | 0       | 12.771    | 14.271    | *** |
| age                   | -5.101  | .108    | -47.24           | 0       | -5.312    | -4.889    | *** |
| : base Spring/summer  | 0       | .       | .                | .       | .         | .         | .   |
| Fall/winter           | -2.006  | .568    | -3.53            | 0       | -3.118    | -.894     | *** |
| Constant              | 108.292 | 1.74    | 62.25            | 0       | 104.882   | 111.701   | *** |
| Random effects:       |         |         |                  |         |           |           |     |
| Project               | 1.260   | 2.306   |                  |         | 0.035     | 45.613    |     |
| School                | 16.762  | 4.630   |                  |         | 9.754     | 28.803    |     |
| Individual identifier | 83.872  | 3.711   |                  |         | 76.905    | 91.471    |     |
| Mean dependent var    |         | 51.534  | SD dependent var |         |           | 26.045    |     |
| Number of obs         |         | 24388   | Chi-square       |         |           | 4363.416  |     |
| Prob > chi2           |         | 0.000   |                  |         |           |           |     |

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$ . Highlighted coefficients are reported in the article



Table 5: Mixed effect linear regression analysis on pre- and post-policy movement (min/school day) in 1<sup>st</sup> – 5<sup>th</sup> grade children during a standardized school day

| movement_min          | Coef.   | St.Err. | t-value          | p-value | [95% Conf | Interval] | Sig |
|-----------------------|---------|---------|------------------|---------|-----------|-----------|-----|
| : base 2009/10        | 0       | .       | .                | .       | .         | .         | .   |
| 2010/11               | -3.704  | .749    | -4.94            | 0       | -5.173    | -2.236    | *** |
| 2012                  | -5.447  | .968    | -5.63            | 0       | -7.344    | -3.55     | *** |
| 2017/18               | 2.404   | .705    | 3.41             | .001    | 1.022     | 3.787     | *** |
| : base Girl           | 0       | .       | .                | .       | .         | .         | .   |
| boy                   | 14.802  | .55     | 26.94            | 0       | 13.725    | 15.879    | *** |
| age                   | -3.278  | .254    | -12.91           | 0       | -3.776    | -2.781    | *** |
| : base Spring/summer  | 0       | .       | .                | .       | .         | .         | .   |
| Fall/winter           | -1.962  | .811    | -2.42            | .016    | -3.552    | -.372     | **  |
| Constant              | 87.121  | 3.051   | 28.55            | 0       | 81.14     | 93.101    | *** |
| Random effects:       |         |         |                  |         |           |           |     |
| Project               | 8.3e-07 | 0.000   |                  |         | 2.9e-24   | 2.3e+11   |     |
| School                | 43.380  | 11.781  |                  |         | 25.475    | 73.865    |     |
| Individual identifier | 88.939  | 5.527   |                  |         | 78.740    | 100.460   |     |
| Mean dependent var    |         | 60.681  | SD dependent var |         |           | 24.665    |     |
| Number of obs         |         | 12122   | Chi-square       |         |           | 1092.361  |     |
| Prob > chi2           |         | 0.000   |                  |         |           |           |     |

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$ . Highlighted coefficients are reported in the article

Table 6: Mixed effect linear regression analysis on pre- and post-policy MVPA (min/school day) in 6<sup>th</sup> – 9<sup>th</sup> grade children during a standardized school day

| movement_min          | Coef.   | St.Err. | t-value          | p-value | [95% Conf | Interval] | Sig |
|-----------------------|---------|---------|------------------|---------|-----------|-----------|-----|
| : base 2009/10        | 0       | .       | .                | .       | .         | .         | .   |
| 2010/11               | -3.429  | 1.372   | -2.50            | .012    | -6.117    | -.74      | **  |
| 2012                  | -5.654  | .663    | -8.52            | 0       | -6.954    | -4.354    | *** |
| 2017/18               | -2.245  | .694    | -3.23            | .001    | -3.606    | -.884     | *** |
| : base Girl           | 0       | .       | .                | .       | .         | .         | .   |
| boy                   | 12.435  | .49     | 25.40            | 0       | 11.475    | 13.394    | *** |
| age                   | -5.878  | .287    | -20.50           | 0       | -6.44     | -5.316    | *** |
| : base Spring/summer  | 0       | .       | .                | .       | .         | .         | .   |
| Fall/winter           | -3.118  | .917    | -3.40            | .001    | -4.915    | -1.321    | *** |
| Constant              | 121.248 | 4.23    | 28.66            | 0       | 112.957   | 129.539   | *** |
| Random effects:       |         |         |                  |         |           |           |     |
| Project               | 0.000   | 0.001   |                  |         | 2.0e-23   | 3.3e+13   |     |
| School                | 26.205  | 6.919   |                  |         | 15.618    | 43.970    |     |
| Individual identifier | 73.670  | 4.729   |                  |         | 64.960    | 83.548    |     |
| Mean dependent var    |         | 42.494  | SD dependent var |         |           | 24.148    |     |
| Number of obs         |         | 12266   | Chi-square       |         |           | 1426.900  |     |
| Prob > chi2           |         | 0.000   |                  |         |           |           |     |

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$ . Highlighted coefficients are reported in the article

## Supplementary material 5: Full mixed effect linear regression models used to estimate effect sizes during a standardized school day on all PA outcomes

Table 1: Mixed effect linear regression analysis on pre- and post-policy movement (min/ school day) during a standardized school day

| <b>movement_min</b>     | <b>Coef.</b> | <b>St.Err.</b> | <b>t-value</b>   | <b>p-value</b> | <b>[95% Conf</b> | <b>Interval]</b> | <b>Sig</b> |
|-------------------------|--------------|----------------|------------------|----------------|------------------|------------------|------------|
| year                    | -1.689       | .185           | -9.15            | 0              | -2.051           | -1.327           | ***        |
| : base Girl             | 0            | .              | .                | .              | .                | .                |            |
| boy                     | 13.529       | .383           | 35.28            | 0              | 12.777           | 14.28            | ***        |
| age                     | -5.058       | .108           | -46.95           | 0              | -5.27            | -4.847           | ***        |
| : base Spring/summer    | 0            | .              | .                | .              | .                | .                |            |
| Fall/winter             | -1.417       | .552           | -2.57            | .01            | -2.499           | -.334            | **         |
| : base Pre-intervention | 0            | .              | .                | .              | .                | .                |            |
| Post-intervention       | 14.187       | 1.441          | 9.85             | 0              | 11.363           | 17.011           | ***        |
| Constant                | 107.284      | 1.754          | 61.16            | 0              | 103.846          | 110.722          | ***        |
| Random effects:         |              |                |                  |                |                  |                  |            |
| Project                 | 1.764        | 2.564          |                  |                | 0.102            | 30.466           |            |
| School                  | 16.237       | 4.504          |                  |                | 9.427            | 27.966           |            |
| Individual identifier   | 84.525       | 3.728          |                  |                | 77.525           | 92.158           |            |
| Mean dependent var      |              | 51.534         | SD dependent var |                |                  | 26.045           |            |
| Number of obs           |              | 24388          | Chi-square       |                |                  | 4332.853         |            |
| Prob > chi2             |              | 0.000          |                  |                |                  |                  |            |

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$ . Highlighted coefficients are reported in the article

Table 2: Mixed effect linear regression analysis on pre- and post-policy MVPA (min/ school day) during a standardized school day

| <b>mvpa_min</b>         | <b>Coef.</b> | <b>St.Err.</b> | <b>t-value</b>   | <b>p-value</b> | <b>[95% Conf</b> | <b>Interval]</b> | <b>Sig</b> |
|-------------------------|--------------|----------------|------------------|----------------|------------------|------------------|------------|
| year                    | -.755        | .119           | -6.36            | 0              | -.987            | -.522            | ***        |
| : base Girl             | 0            | .              | .                | .              | .                | .                |            |
| boy                     | 8.208        | .242           | 33.86            | 0              | 7.733            | 8.683            | ***        |
| age                     | -1.982       | .068           | -29.18           | 0              | -2.115           | -1.849           | ***        |
| : base Spring/summer    | 0            | .              | .                | .              | .                | .                |            |
| Fall/winter             | -.929        | .346           | -2.68            | .007           | -1.608           | -.25             | ***        |
| : base Pre-intervention | 0            | .              | .                | .              | .                | .                |            |
| Post-intervention       | 6.475        | .922           | 7.02             | 0              | 4.668            | 8.282            | ***        |
| Constant                | 43.175       | 1.016          | 42.51            | 0              | 41.184           | 45.166           | ***        |
| Random effects:         |              |                |                  |                |                  |                  |            |
| Project                 | 2.6e-10      | 6.5e-09        |                  |                | 2.4e-31          | 2.9e+11          |            |
| School                  | 5.856        | 1.577          |                  |                | 3.455            | 9.928            |            |
| Individual identifier   | 31.719       | 1.477          |                  |                | 28.952           | 34.751           |            |
| Mean dependent var      |              | 22.611         | SD dependent var |                |                  | 15.578           |            |
| Number of obs           |              | 24388          | Chi-square       |                |                  | 2326.014         |            |
| Prob > chi2             |              | 0.000          |                  |                |                  |                  |            |

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$ . Highlighted coefficients are reported in the article

Table 3: Mixed effect linear regression analysis on pre- and post-policy mean CPM during a standardized school day

| cpm                     | Coef.    | St.Err. | t-value          | p-value | [95% Conf | Interval] | Sig |
|-------------------------|----------|---------|------------------|---------|-----------|-----------|-----|
| year                    | -17.134  | 2.182   | -7.85            | 0       | -21.409   | -12.858   | *** |
| : base Girl             | 0        | .       | .                | .       | .         | .         | .   |
| boy                     | 149.851  | 4.539   | 33.01            | 0       | 140.955   | 158.748   | *** |
| age                     | -47.964  | 1.269   | -37.80           | 0       | -50.451   | -45.477   | *** |
| : base Spring/summer    | 0        | .       | .                | .       | .         | .         | .   |
| Fall/winter             | -29.287  | 6.414   | -4.57            | 0       | -41.859   | -16.715   | *** |
| : base Pre-intervention | 0        | .       | .                | .       | .         | .         | .   |
| Post-intervention       | 141.808  | 17.017  | 8.33             | 0       | 108.456   | 175.159   | *** |
| Constant                | 1031.573 | 19.042  | 54.17            | 0       | 994.251   | 1068.894  | *** |
| Random effects:         |          |         |                  |         |           |           |     |
| Project                 | 2.3e-08  | 2.7e-06 |                  |         | 1.9e-106  | 2.9e+90   |     |
| School                  | 2161.657 | 592.242 |                  |         | 1263.508  | 3698.243  |     |
| Individual identifier   | 11847.61 | 513.421 |                  |         | 10882.88  | 12897.87  |     |
| Mean dependent var      |          | 504.915 | SD dependent var |         |           | 294.312   |     |
| Number of obs           |          | 24388   | Chi-square       |         |           | 3057.964  |     |
| Prob > chi2             |          | 0.000   |                  |         |           |           |     |

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$ . Highlighted coefficients are reported in the article