**Supplementary Material**

Inequalities in adiposity trajectories between 1979 and 1999 in Guatemalan children

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Supplementary Table 1. Number of measurements by calendar year, stratified by sex and group

|  |  |  |
| --- | --- | --- |
|  | Boys | Girls |
|  | High SEP Ladino | Low SEP Ladino | Low SEP Maya | High SEP Ladino | Low SEP Ladino | Low SEP Maya |
|  | N | % | N | % | N | % | N | % | N | % | N | % |
| 1979 | 720 | 3.7 | 457 | 7.7 | 332 | 5.0 | 484 | 3.7 | 407 | 8.7 | 218 | 4.4 |
| 1980 | 756 | 3.9 | 504 | 8.5 | 277 | 4.2 | 537 | 4.2 | 398 | 8.5 | 215 | 4.4 |
| 1981 | 915 | 4.7 | 448 | 7.5 | 316 | 4.8 | 571 | 4.4 | 391 | 8.3 | 177 | 3.6 |
| 1982 | 969 | 5.0 | 423 | 7.1 | 279 | 4.2 | 644 | 5.0 | 343 | 7.3 | 208 | 4.2 |
| 1983 | 1049 | 5.4 | 499 | 8.4 | 223 | 3.4 | 689 | 5.3 | 405 | 8.6 | 151 | 3.1 |
| 1984 | 1035 | 5.3 | 242 | 4.1 | 256 | 3.9 | 710 | 5.5 | 213 | 4.5 | 196 | 4.0 |
| 1985 | 1054 | 5.4 | 244 | 4.1 | 327 | 4.9 | 745 | 5.8 | 191 | 4.1 | 261 | 5.3 |
| 1986 | 947 | 4.9 | 189 | 3.2 | 199 | 3.0 | 620 | 4.8 | 160 | 3.4 | 154 | 3.1 |
| 1987 | 874 | 4.5 | 172 | 2.9 | 198 | 3.0 | 606 | 4.7 | 144 | 3.1 | 131 | 2.7 |
| 1988 | 1012 | 5.2 | 263 | 4.4 | 376 | 5.7 | 656 | 5.1 | 182 | 3.9 | 272 | 5.5 |
| 1989 | 847 | 4.4 | 169 | 2.8 | 317 | 4.8 | 609 | 4.7 | 125 | 2.7 | 229 | 4.7 |
| 1990 | 1020 | 5.2 | 234 | 3.9 | 356 | 5.4 | 700 | 5.4 | 169 | 3.6 | 286 | 5.8 |
| 1991 | 867 | 4.5 | 184 | 3.1 | 320 | 4.8 | 591 | 4.6 | 137 | 2.9 | 249 | 5.1 |
| 1992 | 782 | 4.0 | 213 | 3.6 | 313 | 4.7 | 526 | 4.1 | 155 | 3.3 | 252 | 5.1 |
| 1993 | 1020 | 5.2 | 212 | 3.6 | 368 | 5.5 | 653 | 5.1 | 150 | 3.2 | 272 | 5.5 |
| 1994 | 778 | 4.0 | 215 | 3.6 | 291 | 4.4 | 547 | 4.2 | 151 | 3.2 | 243 | 4.9 |
| 1995 | 964 | 5.0 | 181 | 3.0 | 340 | 5.1 | 662 | 5.1 | 140 | 3.0 | 248 | 5.0 |
| 1996 | 944 | 4.8 | 278 | 4.7 | 380 | 5.7 | 586 | 4.5 | 194 | 4.1 | 295 | 6.0 |
| 1997 | 991 | 5.1 | 286 | 4.8 | 339 | 5.1 | 579 | 4.5 | 223 | 4.8 | 268 | 5.4 |
| 1998 | 1010 | 5.2 | 279 | 4.7 | 425 | 6.4 | 613 | 4.7 | 220 | 4.7 | 278 | 5.6 |
| 1999 | 934 | 4.8 | 267 | 4.5 | 405 | 6.1 | 602 | 4.7 | 199 | 4.2 | 324 | 6.6 |
|  | 19488 | 100 | 5959 | 100 | 6637 | 100 | 12930 | 100 | 4697 | 100 | 4927 | 100 |

Supplementary Table 2. Number of measurements by chronological age, stratified by sex and group

|  |  |  |
| --- | --- | --- |
|  | Boys | Girls |
|  | High SEP Ladino | Low SEP Ladino | Low SEP Maya | High SEP Ladino | Low SEP Ladino | Low SEP Maya |
|  | N | % | N | % | N | % | N | % | N | % | N | % |
| 7 | 1,547 | 7.9 | 606 | 10.2 | 488 | 7.4 | 1,109 | 8.6 | 464 | 9.9 | 409 | 8.3 |
| 8 | 3,239 | 16.6 | 1,259 | 21.1 | 1,136 | 17.1 | 2,111 | 16.3 | 1,002 | 21.3 | 926 | 18.8 |
| 9 | 1,130 | 5.8 | 724 | 12.2 | 914 | 13.8 | 702 | 5.4 | 597 | 12.7 | 807 | 16.4 |
| 10 | 2,232 | 11.5 | 807 | 13.5 | 761 | 11.5 | 1,388 | 10.7 | 644 | 13.7 | 671 | 13.6 |
| 11 | 1,136 | 5.8 | 640 | 10.7 | 651 | 9.8 | 668 | 5.2 | 497 | 10.6 | 543 | 11.0 |
| 12 | 2,336 | 12.0 | 779 | 13.1 | 635 | 9.6 | 1,529 | 11.8 | 601 | 12.8 | 483 | 9.8 |
| 13 | 3,080 | 15.8 | 604 | 10.1 | 683 | 10.3 | 2,115 | 16.4 | 453 | 9.6 | 443 | 9.0 |
| 14 | 1,227 | 6.3 | 321 | 5.4 | 553 | 8.3 | 827 | 6.4 | 234 | 5.0 | 303 | 6.2 |
| 15 | 1,904 | 9.8 | 145 | 2.4 | 437 | 6.6 | 1,189 | 9.2 | 140 | 3.0 | 204 | 4.1 |
| 16 | 942 | 4.8 | 62 | 1.0 | 301 | 4.5 | 694 | 5.4 | 53 | 1.1 | 105 | 2.1 |
| 17 | 715 | 3.7 | 12 | 0.2 | 78 | 1.2 | 598 | 4.6 | 12 | 0.3 | 33 | 0.7 |
|  | 19,488 | 100 | 5,959 | 100 | 6,637 | 100 | 12,930 | 100 | 4,697 | 100 | 4,927 | 100 |

Supplementary Table 3. Differences between the two Low SEP groups in mean height, BMI, TST, and SST Z-scores (in 1979 and 1999) and Z-score changes (from 1979 to 1999), estimated from the multilevel growth curve models: Boys

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | Height CDC Z-score | BMI CDC Z-score | TST CDC Z-score | SST CDC Z-score |
|  |  | Mean  | Difference | Mean  | Difference | Mean  | Difference | Mean  | Difference |
|  |  | B (95% CI) | B (95% CI) | B (95% CI) | B (95% CI) | B (95% CI) | B (95% CI) | B (95% CI) | B (95% CI) |
| 1979 |  |  |  |  |  |  |  |  |
|  | Low SEP Ladino | -1.85 (-1.91, -1.79) | -- | -0.06 (-0.12, 0.004)  | -- | -0.89 (-0.96, -0.81)  | -- | 0.18 (0.11, 0.25)  | -- |
|  | Low SEP Maya | -2.31 (-2.39, -2.23) | -0.46 (-0.55, -0.36) | -0.23 (-0.31, -0.15)  | -0.17 (-0.27, -0.07) | -1.25 (-1.34, -1.16)  | -0.36 (-0.47, -0.25) | -0.21 (-0.3, -0.13)  | -0.39 (-0.50, -0.29) |
| 1999 |  |  |  |  |  |  |  |  |
|  | Low SEP Ladino | -1.46 (-1.53, -1.40) | -- | 0.12 (0.05, 0.19)  | -- | 0.17 (0.09, 0.25)  | -- | 0.48 (0.40, 0.55)  | -- |
|  | Low SEP Maya | -1.77 (-1.83, -1.71) | -0.31 (-0.40, -0.22) | 0.04 (-0.02, 0.11)  | -0.08 (-0.17, 0.02) | -0.06 (-0.13, 0.005)  | -0.23 (-0.34, -0.13) | 0.09 (0.03, 0.16)  | -0.39 (-0.48, -0.29) |
| 1979 to 1999 |  |  |  |  |  |  |  |  |
|  | Low SEP Ladino | 0.39 (0.30, 0.48) | -- | 0.17 (0.08, 0.27)  | -- | 1.06 (0.95, 1.16)  | -- | 0.30 (0.20, 0.39)  | -- |
| Low SEP Maya | 0.54 (0.43, 0.64) | 0.15 (0.01, 0.29) | 0.27 (0.17, 0.37)  | 0.09 (-0.05, 0.23) | 1.18 (1.07, 1.30)  | 0.13 (-0.03, 0.28) | 0.30 (0.20, 0.41)  | 0.01 (-0.14, 0.15) |

Abbreviations: body mass index (BMI), triceps skinfold thickness (TST), socioeconomic position (SEP), subscapular skinfold thickness (SST)

Supplementary Table 4. Differences between the two Low SEP groups in mean height, BMI, TST, and SST Z-scores (in 1979 and 1999) and Z-score changes (from 1979 to 1999), estimated from the multilevel growth curve models: Girls

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | Height CDC Z-score | BMI CDC Z-score | TST CDC Z-score | SST CDC Z-score |
|  |  | Mean  | Difference | Mean  | Difference | Mean  | Difference | Mean  | Difference |
|  |  | B (95% CI) | B (95% CI) | B (95% CI) | B (95% CI) | B (95% CI) | B (95% CI) | B (95% CI) | B (95% CI) |
| 1979 |  |  |  |  |  |  |  |  |
|  | Low SEP Ladino | -1.72 (-1.78, -1.65)  | --  | -0.13 (-0.20, -0.07)  | --  | -0.88 (-0.95, -0.81)  | --  | 0.15 (0.09, 0.22)  | --  |
|  | Low SEP Maya | -2.33 (-2.42, -2.23)  | -0.61 (-0.73, -0.49)  | -0.20 (-0.29, -0.11)  | -0.06 (-0.17, 0.05)  | -1.37 (-1.48, -1.27)  | -0.50 (-0.62, -0.37)  | -0.17 (-0.27, -0.08)  | -0.32 (-0.44, -0.21)  |
| 1999 |  |  |  |  |  |  |  |  |
|  | Low SEP Ladino | -1.39 (-1.47, -1.32)  | --  | 0.06 (-0.01, 0.13)  | --  | 0.03 (-0.05, 0.11)  | --  | 0.42 (0.35, 0.49)  | --  |
|  | Low SEP Maya | -1.74 (-1.81, -1.67)  | -0.35 (-0.45, -0.25)  | 0.05 (-0.01, 0.12)  | -0.01 (-0.11, 0.09)  | -0.21 (-0.29, -0.14)  | -0.24 (-0.35, -0.13)  | 0.23 (0.17, 0.30)  | -0.18 (-0.28, -0.09)  |
| 1979 to 1999 |  |  |  |  |  |  |  |  |
|  | Low SEP Ladino | 0.32 (0.22, 0.43)  | --  | 0.19 (0.09, 0.29)  | --  | 0.91 (0.80, 1.02)  | --  | 0.27 (0.17, 0.37)  | --  |
| Low SEP Maya | 0.58 (0.46, 0.71)  | 0.26 (0.09, 0.42)  | 0.25 (0.13, 0.37)  | 0.06 (-0.10, 0.21)  | 1.16 (1.03, 1.29)  | 0.25 (0.08, 0.42)  | 0.41 (0.29, 0.52)  | 0.14 (-0.01, 0.29)  |

Abbreviations: body mass index (BMI), triceps skinfold thickness (TST), socioeconomic position (SEP), subscapular skinfold thickness (SST)

Supplementary Table 5. Differences between groups in mean TST and SST Z-scores (in 1979 and 1999) and Z-score changes (from 1979 to 1999), estimated from the multilevel growth curve models adjusted for height CDC Z-scores: Boys

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | TST CDC Z-score | SST CDC Z-score |
|  |  | Mean  | Difference | Mean  | Difference |
|  |  | B (95% CI) | B (95% CI) | B (95% CI) | B (95% CI) |
| 1979 |  |  |  |  |
|  | High SEP Ladino | -0.13 (-0.18, -0.08)  | -- | 0.55 (0.50, 0.60)  | -- |
|  | Low SEP Ladino | -0.80 (-0.87, -0.73)  | -0.67 (-0.76, -0.58)  | 0.33 (0.26, 0.40)  | -0.22 (-0.31, -0.14)  |
|  | Low SEP Maya | -1.12 (-1.21, -1.03)  | -0.98 (-1.09, -0.88)  | 0.01 (-0.07, 0.10)  | -0.54 (-0.63, -0.44)  |
| 1999 |  |  |  |  |
|  | High SEP Ladino | 0.58 (0.53, 0.63)  | -- | 0.54 (0.50, 0.58)  | -- |
|  | Low SEP Ladino | 0.22 (0.14, 0.29)  | -0.36 (-0.45, -0.27)  | 0.55 (0.48, 0.63)  | 0.01 (-0.07, 0.10)  |
|  | Low SEP Maya | 0.02 (-0.05, 0.09)  | -0.56 (-0.65, -0.48)  | 0.22 (0.15, 0.28)  | -0.32 (-0.40, -0.24)  |
| 1979 to 1999 |  |  |  |  |
|  | High SEP Ladino | 0.71 (0.64, 0.78)  | -- | -0.01 (-0.08, 0.05)  | -- |
| Low SEP Ladino | 1.02 (0.92, 1.12)  | 0.31 (0.18, 0.43)  | 0.22 (0.13, 0.32)  | 0.24 (0.12, 0.35)  |
| Low SEP Maya | 1.13 (1.02, 1.24)  | 0.42 (0.29, 0.55)  | 0.21 (0.10, 0.31)  | 0.22 (0.10, 0.34)  |

Abbreviations: triceps skinfold thickness (TST), socioeconomic position (SEP), subscapular skinfold thickness (SST)

Supplementary Table 6. Differences between groups in mean TST and SST Z-scores (in 1979 and 1999) and Z-score changes (from 1979 to 1999), estimated from the multilevel growth curve models adjusted for height CDC Z-scores: Girls

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | TST CDC Z-score | SST CDC Z-score |
|  |  | Mean  | Difference | Mean  | Difference |
|  |  | B (95% CI) | B (95% CI) | B (95% CI) | B (95% CI) |
| 1979 |  |  |  |  |
|  | High SEP Ladino | -0.45 (-0.51, -0.39)  | -- | 0.43 (0.38, 0.48)  | -- |
|  | Low SEP Ladino | -0.80 (-0.88, -0.73)  | -0.36 (-0.45, -0.26)  | 0.23 (0.17, 0.29)  | -0.20 (-0.28, -0.12)  |
|  | Low SEP Maya | -1.22 (-1.32, -1.12)  | -0.77 (-0.89, -0.65)  | -0.01 (-0.1, 0.08)  | -0.44 (-0.55, -0.33)  |
| 1999 |  |  |  |  |
|  | High SEP Ladino | 0.59 (0.54, 0.64)  | -- | 0.63 (0.58, 0.68)  | -- |
|  | Low SEP Ladino | 0.07 (-0.02, 0.15)  | -0.52 (-0.62, -0.43)  | 0.45 (0.38, 0.52)  | -0.18 (-0.27, -0.09)  |
|  | Low SEP Maya | -0.13 (-0.21, -0.06)  | -0.72 (-0.81, -0.63)  | 0.31 (0.25, 0.38)  | -0.32 (-0.40, -0.24)  |
| 1979 to 1999 |  |  |  |  |
|  | High SEP Ladino | 1.04 (0.96, 1.12)  | -- | 0.20 (0.13, 0.27)  | -- |
| Low SEP Ladino | 0.87 (0.76, 0.98)  | -0.17 (-0.30, -0.04)  | 0.22 (0.12, 0.32)  | 0.02 (-0.10, 0.14)  |
| Low SEP Maya | 1.09 (0.96, 1.21)  | 0.05 (-0.10, 0.20)  | 0.33 (0.21, 0.44)  | 0.13 (-0.01, 0.26)  |

Abbreviations: triceps skinfold thickness (TST), socioeconomic position (SEP), subscapular skinfold thickness (SST)

Supplementary Figure 1. Trajectories for TST and SST CDC Z-scores between 1979 and 1999, estimated from the multilevel growth curve models adjusted for height CDC Z-scores.

Abbreviations: triceps skinfold thickness (TST), socioeconomic position (SEP), subscapular skinfold thickness (SST)