Supplementary Table 1. Sociodemographic characteristics of the eligible sample, imputed analysis sample, and complete case analysis sample

|  |  |  |  |
| --- | --- | --- | --- |
|  | Eligible sample | Imputed analysis sample  | Complete case analysis sample |
|  | n = 39,583 | n = 28,651 | n = 24,387 |
|  | n (%)  | n (%)  | n (%) |
| *Gender* |  |  |  |
| Male | 20,498 (51.8%) | 14,493 (50.6%) | 12,348 (50.6%) |
| Female | 18,626 (47.1%) | 13,740 (48.0%) | 11,686 (47.9%) |
| Other  | 459 (1.2%) | 418 (1.5%) | 353 (1.5%) |
| *Grade level*  |  |  |  |
| Grade 5 | 13,815 (34.9%) | 10,729 (37.5%) | 9,085 (37.3%) |
| Grade 7 | 13,028 (32.9%) | 9,937 (34.7%) | 8,520 (34.9%) |
| Grade 9 | 12,740 (32.2%) | 7,985 (27.9%) | 6,782 (27.8%) |
| *Language background* |  |  |  |
| English only | 30,141 (76.2%) | 21,615 (75.4%) | 18,404 (75.5%) |
| Non-English speaking background | 9,442 (23.9%) | 7,036 (24.6%) | 5,983 (24.5%) |
| *Highest education level of parents* |  |  |
| Year 11 or equivalent or below | 5,238 (13.2%) | 3,065 (10.7%) | 2,543 (10.4%) |
| Year 12 or equivalent | 4,024 (10.2%) | 2,705 (9.4%) | 2,341 (9.6%) |
| Certificate I to IV | 11,483 (29.0%) | 8,232 (28.7%) | 7,125 (29.2%) |
| Advanced Diploma or Diploma | 5,261 (13.3%) | 3,895 (13.6%) | 3,414 (14.0%) |
| Bachelor’s degree or above | 12,343 (31.2%) | 9,967 (34.8%) | 8,964 (36.8%) |
| Missing | 1,234 (3.1%) | 787 (2.8%) | - |
| *Community socioeconomic position* |  |  |
| 1 (Most disadvantaged) | 11,333 (28.6%) | 7,292 (25.5%) | 5,923 (24.3%) |
| 2 | 6,510 (16.5%) | 4,672 (16.3%) | 3,966 (16.3%) |
| 3 | 6,320 (16.0%) | 4,538 (15.8%) | 3,886 (15.9%) |
| 4  | 7,589 (19.2%) | 5,882 (20.5%) | 5,130 (21.0%) |
| 5 (Most advantaged) | 7,576 (19.1%) | 6,210 (21.7%) | 5,482 (22.5%) |
| Missing | 255 (0.6%) | 57 (0.2%) | - |
| *Geographical remoteness* |  |  |  |
| Major Cities  | 27,190 (68.7%) | 20,187 (70.5%) | 17,289 (70.9%) |
| Inner Regional  | 5,631 (14.2%) | 4,003 (14.0%) | 3,408 (14.0%) |
| Outer Regional | 4,838 (12.2%) | 3,311 (11.6%) | 2,786 (11.4%) |
| Remote/Very Remote | 1,675 (4.2%) | 1,095 (3.8%) | 904 (3.7%) |
| Missing | 249 (0.6%) | 55 (0.2%) | - |

Supplementary Table 2. Prevalence of low academic achievement by breakfast skipping categories among the complete case analysis sample (n = 24,387)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Never skips | Sometimes skips | Always skips | Total |
|  | n = 8,084 (33.2%)  | n = 13,972 (57.3%) | n = 2,331 (9.6%) | n = 24,387(100.0%) |
|  | n (%) | n (%) | n (%) | n (%) |
| Numeracy | 994 (12.3%) | 2,616 (18.7%) | 709 (30.4%) | 4,319 (17.7%) |
| Reading | 1,003 (12.4%) | 2,522 (18.1%) | 641 (27.5%) | 4,166 (17.1%) |
| Spelling | 1,254 (15.5%) | 2,757 (19.7%) | 634 (27.2%) | 4,645 (19.1%) |
| Grammar | 1,361 (16.8%) | 3,322 (23.8%) | 797 (34.2%) | 5,480 (22.5%) |
| Writing | 1,963(24.3%) | 4,110 (29.4%) | 891 (38.2%) | 6,964 (28.6%) |

Supplementary Table 3. Results from regression analyses examining the effect of breakfast skipping on low academic achievement among the complete case analysis sample (n = 24,387)

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Unadjusted | Adjusted |
|  |  | RR [95% CI] | RR [95% CI] |
| Numeracy |  |  |  |
|  | Never skips | Ref | Ref |
|  | Sometimes skips | 1.52\* [1.41-1.65] | 1.37\* [1.28-1.48] |
|  | Always skips | 2.47\* [2.24-2.73] | 1.79\* [1.63-1.97] |
| Reading |  |  |  |
|  | Never skips | Ref | Ref |
|  | Sometimes skips | 1.45\* [1.34-1.57] | 1.34\* [1.24-1.45] |
|  | Always skips | 2.22\* [2.01-2.44] | 1.68\* [1.53-1.85] |
| Spelling  |  |  |  |
|  | Never skips | Ref | Ref |
|  | Sometimes skips | 1.27\* [1.19-1.36] | 1.18\* [1.11-1.26] |
|  | Always skips | 1.75\* [1.61-1.91] | 1.36\* [1.25-1.48] |
| Grammar |  |  |  |
|  | Never skips | Ref | Ref |
|  | Sometimes skips | 1.41\* [1.32-1.51] | 1.32\* [1.24-1.40] |
|  | Always skips | 2.03\* [1.86-2.21] | 1.59\* [1.46-1.72] |
| Writing |  |  |  |
|  | Never skips | Ref | Ref |
|  | Sometimes skips | 1.21\* [1.15-1.27] | 1.13\* [1.08-1.19] |
|  | Always skips | 1.57\* [1.46-1.70] | 1.24\* [1.16-1.32] |

*Notes*. RR: Relative Risk, CI: Confidence interval. \*p < .001