**Supplementary Table 1: Flow diagram describing all multilevel models in analyses of variation in the amount of non-core** energy **eaten in an eating occasion.**

|  |  |  |
| --- | --- | --- |
| **Model** | **Description of the model** | **Purpose** |
| Model 1 | Random intercept null model (no explanatory variables) | To partition within and between person variation |
| * Model 1.1 | Random intercept model with physical eating context dummy variables | To estimate the unadjusted association of each physical context |
| * Model 1.2 | Random intercept model with social eating context dummy variables | To estimate the unadjusted association of each social context |
| * Model 1.3 | Random intercept model with time of the day variable | To estimate the unadjusted association of time |
| * Model 1.4 | Random intercept model with day of the week variable | To estimate the unadjusted association of day of the week |
| * Model 1.5 | Random intercept model with sex | To estimate the unadjusted association of sex |
| * Model 1.6 | Random intercept model with age | To estimate the unadjusted association of age |
| * Model 1.7 | Random intercept model with BMI | To estimate the unadjusted association of BMI |
| * Model 1.8 | Random intercept model with EI | To estimate the unadjusted association of EI |
| * Model 1.9 | Random intercept model with SES dummy variables | To estimate the unadjusted association of SES |
| Model 2 | Random intercept model with EO level variables, i.e. physical eating contexts, social eating contexts, time of day and day of the week. | To estimate the adjusted association of eating occasion level factors |
| Model 3 | Model 2 plus adolescent level variables, i.e. sex, age, BMI, EI, SES. | To estimate the adjusted association of person level factors |
| Model 4 | Model 3 plus eating context/sex interaction variable | To estimate whether the associations of eating context differs between girls and boys |
| Model 5 | Model 3 plus eating context/SES interaction variable | To estimate whether the associations of eating context differs between SES groups |
| Model 6 | Model 3 plus eating context/BMI interaction variable | To estimate whether the associations of eating context differs between normal and overweight adolescents. |

Abbreviations: BMI – Body Mass Index, EI – Energy Intake, SES – Socio-Economic Status

**Supplementary Table 2**: Absolute frequencies and percentages. of EOs in the survey and across different EO characteristics, i.e. non-core EOs, weekday and meal slot.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Total EOs** | | **Noncore EOsa** | | **Weekday** | | **Meal slotsb** | | | | | | | | | | |
|  | **06:00-12:00** | | **12:00-14:00** | | **14:00-17:00** | | **17:00-20:00** | | **20:00-06:00** | | |
|  | **n** | **%¥** | **n** | **%¥** | **n** | **%¥** | **n** | **%¥** | **n** | **%¥** | **n** | **%¥** | **n** | **%¥** | **n** | **%¥** |
| **Survey** | 19827 | 100 | 13723 | 69 | 13816 | 70 | 5064 | 26 | 3424 | 17 | 3259 | 16 | 4164 | 21 | 3916 | 20 |
| **WHERE** | **n** | **%†** | **n** | **%†** | **n** | **%†** | **n** | **%†** | **n** | **%†** | **n** | **%†** | **n** | **%†** | **n** | **%†** |
| **Home** | 13517 | 68 | 8909 | 65 | 9093 | 66 | 3502 | 69 | 1342 | 39 | 2161 | 66 | 3400 | 82 | 3112 | 79 |
| **Friend's/Relative's house** | 932 | 5 | 739 | 5 | 496 | 4 | 137 | 3 | 108 | 3 | 152 | 5 | 247 | 6 | 288 | 7 |
| **School** | 2359 | 12 | 1713 | 12 | 2329 | 17 | 933 | 18 | 1274 | 37 | 129 | 4 | 17 | 0 | 6 | 0 |
| **Eateries** | 731 | 4 | 648 | 5 | 403 | 3 | 52 | 1 | 181 | 5 | 148 | 5 | 136 | 3 | 214 | 5 |
| **On the go** | 1069 | 5 | 878 | 6 | 716 | 5 | 188 | 4 | 234 | 7 | 396 | 12 | 154 | 4 | 97 | 2 |
| **Activity/Other places** | 816 | 4 | 572 | 4 | 470 | 3 | 131 | 3 | 146 | 4 | 182 | 6 | 172 | 4 | 185 | 5 |
| **Work** | 403 | 2 | 264 | 2 | 309 | 2 | 121 | 2 | 139 | 4 | 91 | 3 | 38 | 1 | 14 | 0 |
| **WITH WHOM** | **n** | **%†** | **n** | **%†** | **n** | **%†** | **n** | **%†** | **n** | **%†** | **n** | **%†** | **n** | **%†** | **n** | **%†** |
| **Alone** | 4808 | 24 | 2897 | 21 | 3391 | 25 | 1615 | 32 | 561 | 16 | 905 | 28 | 653 | 16 | 1074 | 27 |
| **Parents/Carers** | 2877 | 15 | 1995 | 15 | 1957 | 14 | 752 | 15 | 295 | 9 | 471 | 14 | 797 | 19 | 562 | 14 |
| **Parents & Siblings** | 2871 | 14 | 2011 | 15 | 1932 | 14 | 628 | 12 | 278 | 8 | 457 | 14 | 987 | 24 | 521 | 13 |
| **Family & Friends** | 2350 | 12 | 1754 | 13 | 1404 | 10 | 387 | 8 | 275 | 8 | 358 | 11 | 835 | 20 | 495 | 13 |
| **Friends** | 4618 | 23 | 3564 | 26 | 3605 | 26 | 1158 | 23 | 1632 | 48 | 642 | 20 | 515 | 12 | 671 | 17 |
| **Not specified** | 2303 | 12 | 1502 | 11 | 1527 | 11 | 524 | 10 | 383 | 11 | 426 | 13 | 377 | 9 | 593 | 15 |

Abbreviations: EOs – Eating Occasions

a EOs containing at least one non-core food

bMeal slots are based on NDNS categories

¥These are percentages of all EOs in the whole survey

†These are percentages of all EOs across the different EOs characteristics.

**Supplementary Table 3:** Frequencies and percentages of adolescents 11-18 years old in NDNS (2008-2011/12) across their different characteristics.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Adolescents** | | **Boys** | | **High SES** | | **Intermediate SES** | |
|  | **n** | **%** | **n** | **%** | **n** | **%** | **n** | **%** |
| **Survey** | 884 | 100 | 445 | 50 | 362 | 41 | 167 | 19 |
| **WHERE** | **n** | **%a** | **n** | **%a** | **n** | **%a** | **n** | **%a** |
|
| **Home** | 883 | 100 | 444 | 100 | 362 | 100 | 167 | 100 |
| **Friend's/Relative's house** | 315 | 36 | 148 | 33 | 134 | 37 | 55 | 33 |
| **School** | 554 | 63 | 286 | 64 | 238 | 66 | 105 | 63 |
| **Eateries** | 324 | 37 | 155 | 35 | 145 | 40 | 62 | 37 |
| **On the go** | 445 | 50 | 218 | 49 | 185 | 51 | 82 | 49 |
| **Activity/Other places** | 337 | 38 | 177 | 40 | 156 | 43 | 63 | 38 |
| **Work** | 108 | 12 | 45 | 10 | 42 | 12 | 27 | 16 |
| **WITH WHOM** | **n** | **%a** | **n** | **%a** | **n** | **%a** | **n** | **%a** |
|
| **Alone** | 776 | 88 | 388 | 87 | 334 | 92 | 146 | 87 |
| **Parents/Carers** | 596 | 67 | 293 | 66 | 253 | 70 | 109 | 65 |
| **Parents & Siblings** | 496 | 56 | 245 | 55 | 203 | 56 | 98 | 59 |
| **Family & Friends** | 508 | 57 | 245 | 55 | 205 | 57 | 98 | 59 |
| **Friends** | 773 | 87 | 382 | 86 | 321 | 89 | 148 | 89 |
| **Not specified** | 464 | 52 | 244 | 55 | 168 | 46 | 95 | 57 |

Abbreviations: EO – Eating occasion, SES – Socio-economic status SD – standard deviation

aPercentages are calculated from the total of adolescents in each characteristic, e.g. the total number of boys, adolescents from high SES and intermediate SES is the denominator