**Supplemental Table 1.** Distribution of the factors associated with nutritional outcomes in the mother-child dyad. ORs and 95% CIs obtained in the analysis of each factor individually associated with the outcome, adjusted for maternal age, age and sex of the child. Brazil, PNDS (2006-2007).

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Total** | | | | **OM/NC** | | | | | | | | | | **NM/SSC** | | | | | | | | | | | **OM/SSC** | | | | | |
| **n** | | | **%** | **n** | | **%** | | **OR1** | | **95% CI1** | | **n** | | | **%** | | **OR1** | | **95% CI1** | | **n** | | | **%** | | | **OR1** | **95% CI1** |
| **MATERNAL SOCIOECONOMIC STATUS** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Maternal employment**  No (ref.) | | 2.138 | | 57.6 | | 822 | | 53.4 | | - | | - | | 119 | | | 57.6 | | - | | - | | 62 | 53.5 | | | - | | - |
| Yes | | 1.536 | | 42.4 | | 630 | | 46.6 | | 1.16 | | 0.90 - 1.50 | | 51 | | | 42.4 | | 1.15 | | 0.52 - 2.56 | | 41 | 46.5 | | | 1.36 | | 0.64 - 2.88 |
| **Maternal educational level (years)**  > 8 (ref.) | | 1.440 | | 44.8 | | 530 | | 44.3 | | - | | - | | 42 | | | 27.0 | | - | | - | | 16 | 18.5 | | | - | | - |
| ≤ 8 | | 2.214 | | 55.2 | | 916 | | 55.7 | | 1.21 | | 0.94 - 1.55\* | | 128 | | | 73.0 | | 2.46 | | 1.31 - 4.61\* | | 86 | 81.5 | | | 4.54 | | 1.84 - 11.22\* |
| **Maternal marital status**  Married (ref.) | | 3.113 | | 85.2 | | 1.266 | | 87.2 | | - | | - | | 141 | | | 90.0 | | - | | - | | 92 | 90.1 | | | - | | - |
| Single/widowed | | 561 | | 14.8 | | 187 | | 12.8 | | 0.84 | | 0.57 - 1.22 | | 29 | | | 10.0 | | 0.54 | | 0.27 - 1.08\* | | 11 | 9.9 | | | 0.61 | | 0.21 - 1.72 |
| **Maternal skin color**  White (ref.) | | 1.286 | | 34.6 | | 526 | | 36.3 | | - | | - | | 59 | | | 38.4 | | - | | - | | 22 | 21.4 | | | - | | - |
| Nonwhite | | 2.350 | | 65.4 | | 910 | | 63.7 | | 0.91 | | 0.71 - 1.18 | | 108 | | | 61.6 | | 0.77 | | 0.42 - 1.42 | | 79 | 78.6 | | | 1.95 | | 0.87 - 4.35\* |
| **Area of residence**  Urban (ref.) | | 2.438 | | 81.4 | | 954 | | 81.2 | | - | | - | | 109 | | | 81.2 | | - | | - | | 57 | 79.5 | | | - | | - |
| Rural | | 1.238 | | 18.6 | | 499 | | 18.8 | | 1.08 | | 0.73 - 1.58 | | 61 | | | 18.8 | | 0.98 | | 0.55 - 1.72 | | 46 | 20.5 | | | 1.27 | | 0.69 - 2.33 |
| **Region of residence**  Southeast (ref.) | | 743 | | 41.8 | | 322 | | 44.2 | | - | | - | | 20 | | | 31.6 | | - | | - | | 14 | 34.8 | | | - | | - |
| South | | 710 | | 12.8 | | 298 | | 13.1 | | 0.96 | | 0.71 - 1.30 | | 32 | | | 17.7 | | 1.79 | | 0.75 - 4.26\* | | 24 | 15.1 | | | 1.38 | | 0.53 - 3.61 |
| North | | 770 | | 9.9 | | 259 | | 8.0 | | 0.74 | | 0.54 - 1.02\* | | 65 | | | 21.6 | | 2.62 | | 1.14 - 6.02\* | | 39 | 25.7 | | | 3.09 | | 1.30 - 7.35\* |
| Northeast | | 722 | | 27.7 | | 276 | | 27.1 | | 0.91 | | 0.63 - 1.30 | | 31 | | | 23.0 | | 0.99 | | 0.41 - 2.38 | | 15 | 21.0 | | | 0.89 | | 0.33 - 2.33 |
| Midwest | | 731 | | 7.8 | | 298 | | 7.6 | | 0.87 | | 0.64 - 1.20 | | 22 | | | 6.1 | | 0.92 | | 0.35 - 2.40 | | 11 | 3.4 | | | 0.48 | | 0.16 - 1.36\* |
| **Household goods (tertile)**  Third (ref.) | | 1.155 | | 34.1 | | 481 | | 37.7 | | - | | - | | 27 | | | 16.3 | | - | | - | | 26 | 33.6 | | | - | | - |
| Second | | 1.199 | | 33.0 | | 504 | | 33.8 | | 1.03 | | 0.78 - 1.37 | | 45 | | | 34.0 | | 2.14 | | 0.95 - 4.81\* | | 26 | 24.8 | | | 0.85 | | 0.29 - 2.50 |
| First | | 1.321 | | 32.9 | | 467 | | 28.5 | | 0.92 | | 0.70 - 1.21 | | 98 | | | 49.7 | | 2.97 | | 1.52 - 5.79\* | | 51 | 41.6 | | | 1.46 | | 0.59 - 3.57 |
| ENVIRONMENTAL CONDITIONS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Water source**  Public network (ref.) | | 2.030 | | 63.7 | | 840 | | 65.2 | | - | | - | | 90 | | | 56.2 | | - | | - | | 54 | 66.9 | | | - | | - |
| Others | | 1.601 | | 36.3 | | 595 | | 34.8 | | 0.91 | | 0.67 - 1.23 | | 75 | | | 43.8 | | 1.31 | | 0.72 - 2.38 | | 47 | 33.1 | | | 0.83 | | 0.43 - 1.58 |
| **Sewage system**  Public network (ref.) | | 1.096 | | 47.6 | | 463 | | 50.3 | | - | | - | | 42 | | | 44.9 | | - | | - | | 22 | 38.6 | | | - | | - |
| Others | | 2.171 | | 52.4 | | 860 | | 49.7 | | 0.86 | | 0.66 - 1.12 | | 82 | | | 55.1 | | 0.96 | | 0.47 - 1.97 | | 59 | 61.4 | | | 1.32 | | 0.56 - 3.08 |
| **Type of residence**  Masonry (ref.) | | 2.774 | | 87.2 | | 1.122 | | 88.3 | | - | | - | | 95 | | | 69.3 | | - | | - | | 58 | 69.3 | | | - | | - |
| Others | | 865 | | 12.8 | | 315 | | 11.7 | | 1.05 | | 0.80 - 1.37 | | 73 | | | 30.7 | | 3.18 | | 1.90 - 5.31\* | | 43 | 30.7 | | | 3.63 | | 1.91 - 6.90\* |
| SOCIAL VULNERABILITY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Beneficiary of family allowance**  No (ref.) | | 2.639 | | 75.8 | | 1.021 | | 74.7 | | - | | - | | 105 | | | 70.3 | | - | | - | | 66 | 66.5 | | | - | | - |
| Yes | | 1.034 | | 24.2 | | 431 | | 25.3 | | 1.14 | | 0.84 - 1.56 | | 65 | | | 29.7 | | 1.47 | | 0.88 - 2.44\* | | 36 | 33.5 | | | 1.88 | | 0.89 - 3.94\* |
| **EBIA**  Food security (ref.) | | 1.831 | | 53.8 | | 740 | | 56.2 | | - | | - | | 60 | | | 49.6 | | - | | - | | 39 | 42.4 | | | - | | - |
| Mild food insecurity | | 969 | | 27.6 | | 395 | | 27.3 | | 0.98 | | 0.74 - 1.31 | | 44 | | | 24.3 | | 0.93 | | 0.46 - 1.88 | | 23 | 28.4 | | | 1.40 | | 0.58 - 3.36 |
| Moderate food insecurity | | 446 | | 12.2 | | 163 | | 11.1 | | 0.87 | | 0.59 - 1.29 | | 32 | | | 17.9 | | 1.48 | | 0.72 - 3.03 | | 17 | 16.1 | | | 1.78 | | 0.76 - 4.16\* |
| Severe food insecurity | | 321 | | 6.4 | | 111 | | 5.4 | | 0.87 | | 0.56 - 1.35 | | 28 | | | 8.2 | | 1.49 | | 0.66 - 3.36 | | 23 | 13.1 | | | 3.32 | | 1.42 - 7.72\* |
| MATERNAL CHARACTERISTICS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Maternal height (tertile)**  Third (ref.) | | 1.212 | | 36.2 | | 466 | | 36.3 | | - | | - | | 28 | | | 16.6 | | - | | - | | 18 | 34.5 | | | - | | - |
| Second | | 1.214 | | 33.2 | | 512 | | 33.0 | | 0.94 | | 0.69 - 1.29 | | 30 | | | 27.0 | | 1.64 | | 0.63 - 4.27 | | 26 | 24.6 | | | 0.75 | | 0.30 - 1.87 |
| First | | 1.238 | | 30.6 | | 463 | | 30.7 | | 1.08 | | 0.81 - 1.45 | | 112 | | | 56.4 | | 4.25 | | 2.22 - 8.15\* | | 59 | 40.9 | | | 1.52 | | 0.65 - 3.56 |
| **Number of Children**  One (ref.) | | 2.721 | | 78.5 | | 1.042 | | 78.2 | | - | | - | | 109 | | | 72.3 | | - | | - | | 53 | 65.7 | | | - | | - |
| More than one | | 955 | | 21.5 | | 411 | | 21.8 | | 0.98 | | 0.70 - 1.37 | | 61 | | | 27.7 | | 1.60 | | 0.88 - 2.93\* | | 50 | 34.3 | | | 2.14 | | 0.98 - 4.69\* |
| **Breastfeeding**  Yes (ref.) | | 3.556 | | 96.8 | | 1.399 | | 96.1 | | - | | - | | 167 | | | 98.5 | | - | | - | | 96 | 94.1 | | | - | | - |
| No | | 117 | | 31.2 | | 53 | | 3.9 | | 1.98 | | 1.06 - 3.70\* | | 3 | | | 1.52 | | 0.66 | | 0.13 - 3.21 | | 7 | 5.9 | | | 3.07 | | 1.10 - 8.58\* |
| CHILD CHARACTERISTICS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Fruits intake (days)**  More than 4 days a week (ref.) | | | 1.865 | 54.4 | | 767 | | 57..9 | | - | | - | | 83 | | | 53.4 | | - | | - | | 50 | 53.8 | | | - | | - |
| Less than 4 days a week | | | 1.777 | 45.6 | | 668 | | 42..1 | | 0.88 | | 0.70 - 1.11 | | 85 | | | 46.6 | | 0.95 | | 0.51 - 1.78 | | 53 | 46.2 | | | 0.95 | | 0.48 - 1.87 |
| **Vegetables intake (days)**  More than 4 days a week (ref.) | | | 642 | 17.0 | | 252 | | 18.1 | | - | | - | | 16 | | | 7.0 | | - | | - | | 15 | 12.1 | | | - | | - |
| Less than 4 days a week | | | 2.977 | 83.0 | | 1.170 | | 81.9 | | 1.07 | | 0.78 - 1.48 | | 151 | | | 93.0 | | 2.80 | | 1.31 - 6.01\* | | 88 | 87.9 | | | 1.57 | | 0.69 - 3.56 |
| **Legumes intake (days)**  More than 4 days a week (ref.) | | | 1.208 | 33.2 | | 492 | | 35.9 | | - | | - | | 38 | | | 21.3 | | - | | - | | 20 | 33.9 | | | - | | - |
| Less than 4 days a week | | | 2.433 | 66.8 | | 943 | | 64.1 | | 0.89 | | 0.70 - 1.14 | | 131 | | | 78.7 | | 1.69 | | 0.99 - 2.88\* | | 81 | 66.1 | | | 0.94 | | 0.41 - 2.13 |
| **Rice intake (days)**  More than 4 days a week (ref.) | | | 2.874 | 77.2 | | 1.193 | | 81.0 | | - | | - | | 130 | | | 78.1 | | - | | - | | 71 | 71.2 | | | - | | - |
| Less than 4 days a week | | | 773 | 22.8 | | 247 | | 19.0 | | 0.83 | | 0.61 - 1.12 | | 38 | | | 21.9 | | 0.92 | | 0.36 - 2.34 | | 31 | 28.8 | | | 1.04 | | 0.43 - 2.49 |
| **Beans intake (days)**  More than 4 days a week (ref.) | | | 2.479 | 67.2 | | 1011 | | 68.0 | | - | | - | | 102 | | | 67.3 | | - | | - | | 65 | 61.6 | | | - | | - |
| Less than 4 days a week | | | 1.155 | 32.8 | | 426 | | 32.0 | | 1.01 | | 0.76 - 1.35 | | 66 | | | 33.0 | | 0.99 | | 0.51 - 1.92 | | 37 | 38.4 | | | 1.12 | | 0.53 - 2.34 |
| **Fish intake (days)**  More than 4 days a week | | | 268 | 5.2 | | 84 | | 4.2 | | - | | - | | 22 | | | 6.3 | | - | | - | | 18 | 11.7 | | | - | | - |
| Less than 4 days a week | | | 3.363 | 94.8 | | 1.343 | | 95.8 | | 1.50 | | 0.93 - 2.40\* | | 146 | | | 93.7 | | 0.95 | | 0.39 - 2.28 | | 85 | 88.3 | | | 0.37 | | 0.17 - 0.81\* |
| **Meat intake (days)**  More than 4 days a week (ref.) | | | 1.473 | 35.1 | | 629 | | 35.9 | | - | | - | | 52 | | | 29.1 | | - | | - | | 38 | 39.6 | | | - | | - |
| Less than 4 days a week | | | 2.162 | 64.9 | | 797 | | 64.1 | | 1.08 | | 0.83 - 1.39 | | 115 | | | 70.9 | | 1.41 | | 0.85 - 2.34\* | | 65 | 60.4 | | | 0.75 | | 0.37 - 1.50 |
| **Soft drink intake (days)**  Less than 4 days a week (ref.) | | | 2.558 | 68.4 | | 958 | | 65.3 | | - | | - | | 133 | | | 64.5 | | - | | - | | 73 | 66.5 | | | - | | - |
| More than 4 days a week | | | 1.089 | 31.6 | | 478 | | 34.7 | | 1.23 | | 0.96 - 1.59\* | | 35 | | | 35.5 | | 1.26 | | 0.56 - 2.81 | | 30 | 33.5 | | | 1.39 | | 0.62 - 3.10 |
| **Fried food intake(days)**  Less than 4 days a week (ref.) | | | 3.258 | 89.3 | | 1.276 | | 89.6 | | - | | - | | 152 | | | 83.0 | | - | | - | | 84 | 79.1 | | | - | | - |
| More than 4 days a week | | | 369 | 10.7 | | 151 | | 10.4 | | 1.09 | | 0.74 - 1.61 | | 16 | | | 17.0 | | 1.84 | | 0.53 - 6.30 | | 17 | 20.9 | | | 3.03 | | 1.08 - 8.47\* |
| **Candy intake (days)**  Less than 4 days a week (ref.) | | | 2.488 | 68.6 | | 964 | | 67.4 | | - | | - | | 526 | | | 65.6 | | - | | - | | 73 | 70.5 | | | - | | - |
| More than 4 days a week | | | 1.135 | 31.4 | | 467 | | 32.6 | | 1.06 | | 0.78 - 1.44 | | 42 | | | 34.4 | | 1.14 | | 0.51 - 2.54 | | 30 | 29.5 | | | 1.13 | | 0.47 - 2.67 |
| ADJUSTMENTS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Maternal age (years)**  ≥ 25 (ref.) | | | 2.348 | 59.5 | | 1052 | | 69.7 | | - | | - | | 93 | | | 48.9 | | - | | - | | 72 | 64.0 | | | - | | - |
| < 25 | | | 1.328 | 40.5 | | 401 | | 30.3 | | 0.52 | | 0.40 - 0.67\* | | 77 | | | 51.1 | | 1.26 | | 0.74 - 2.16 | | 31 | 36.0 | | | 0.59 | | 0.29 - 1.20\* |
| **Child age (months)**  ≥ 24 (ref.) | | | 2.386 | 62.1 | | 997 | | 66.5 | | - | | - | | 117 | | | 63.9 | | - | | - | | 67 | 47.0 | | | - | | - |
| < 24 | | | 1.290 | 37.9 | | 456 | | 33.5 | | 0.85 | | 0.66 - 1.09 | | 53 | | | 36.1 | | 0.82 | | 0.42 - 1.69 | | 36 | 53.1 | | | 1.87 | | 0.93 - 3.72\* |
| **Child gender**  Male | | | 1.871 | 52.0 | | 733 | | 50.6 | | - | | - | | 89 | | | 56.0 | | - | | - | | 55 | 60.0 | | | - | | - |
| Female | | | 1.805 | 48.0 | | 720 | | 49.4 | | 1.10 | | 0.88 - 1.39 | | 81 | | | 44.0 | | 0.87 | | 0.49 - 1.55 | | 48 | 40.0 | | | 0.75 | | 0.40 - 1.40 |

OM/NC, overweight mother and child with normal height; NM/SSC, mother with normal weight and child with shortstature; OM/SSC, overweight mother and short-stature child – double burden of malnutrition; OR, odds ratio; 95% CI, 95% confidence interval

1: Step 1: regression adjusted by maternal age, gender and age of the child

\*p ≤ 0.20

**Supplemental Table 2.** ORs and 95% CIs of intra-block analyses of the selected factors according to nutritional outcomes in the mother-child dyad. Brazil, PNDS (2006-2007).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | **Categories** | **OM/NC** | | | **NM/SSC** | | | **OM/SSC** | |
| **OR1** | **95% CI1** | **OR1** | | **95% CI1** | **OR1** | | **95% CI1** |
| **Level 1 – Socioeconomic Factors**  Maternal educational level (years) | > 8 (ref.) | - | - | - | | - | - | | - |
| ≤ 8 | 1.26 | 0.96 - 1.64 | 1.96 | | 0.94 - 4.08 | 4.76 | | 1.99 - 11.41\* |
| Maternal marital status | Married (ref.) | - | - | - | | - | - | | - |
|  | Single/widowed/divorced | 0.83 | 0.57 - 1.20 | 0.48 | | 0.23 - 1.01 | 0.59 | | 0.21 - 1.64 |
| Maternal skin color | White (ref.) | - | - | - | | - | - | | - |
|  | Nonwhite | 0.91 | 0.70 - 1.20 | 0.68 | | 0.35 - 1.34 | 1.77 | | 0.76 - 4.11 |
| Region of residence | Southeast (ref.) | - | - | - | | - | - | | - |
|  | South | 0.86 | 0.63 - 1.18 | 1.57 | | 0.66 - 3.71 | 1.29 | | 0.48 - 3.49 |
|  | North | 0.76 | 0.54 - 1.07 | 2.02 | | 0.90 - 4.52 | 2.80 | | 1.17 - 6.66\* |
|  | Northeast | 0.91 | 0.62 - 1.35 | 0.69 | | 0.29 - 1.65 | 0.78 | | 0.29 - 2.04 |
|  | Midwest | 0.86 | 0.62 - 1.18 | 0.79 | | 0.30 - 2.10 | 0.51 | | 0.18 - 1.47 |
| Household goods (tertile) | Third (ref.) | - | - | - | | - | - | | - |
|  | Second | 1.01 | 0.76 - 1.36 | 2.21 | | 1.04 - 4.68\* | 0.66 | | 0.22 - 1.96 |
|  | First | 0.90 | 0.63 - 1.26 | 2.82 | | 1.20 - 6.61\* | 0.70 | | 0.28 - 1.74 |
| **Level 2 – Block A – Environmental factors**  Type of residence | Masonry (ref.) | - | - | - | | - | - | | - |
|  | Others | 1.05 | 0.80 - 1.37 | 3.18 | | 1.90 - 5.31\* | 3.63 | | 1.91 - 6.90\* |
| **Block B – Social vulnerability**  Family allowance | No (ref.) | - | - | - | | - | - | | - |
|  | Yes | 1.24 | 0.90 - 1.70 | 1.43 | | 0.88 - 2.32 | 1.61 | | 0.69 - 3.77 |
| EBIA | Food security (ref.) | - | - | - | | - | - | | - |
|  | Mild food insecurity | 0.97 | 0.72 - 1.30 | 0.91 | | 0.45 - 1.82 | 1.37 | | 0.55 - 3.43 |
|  | Moderate food insecurity | 0.82 | 0.56 - 1.21 | 1.35 | | 0.67 - 2.69 | 1.60 | | 0.63 - 4.03 |
|  | Severe food insecurity | 0.82 | 0.52 - 1.29 | 1.35 | | 0.62 - 2.92 | 2.93 | | 1.09 - 7.80\* |
| **Level 3 – Block A – Maternal characteristics**  Maternal height (tertile) | Third (ref.) | - | - | - | | - | - | | - |
|  | Second | 0.95 | 0.70 - 1.28 | 1.62 | | 0.62 - 4.23 | 0.72 | | 0.29 - 1.78 |
|  | First | 1.08 | 0.81 - 1.45 | 4.21 | | 2.19 - 8.09\* | 1.48 | | 0.63 - 3.45 |
| Number of children | One (ref.) | - | - | - | | - | - | | - |
|  | More than one | 0.98 | 0.71-1.37 | 1.57 | | 0.85-2.10 | 2.19 | | 1.03 - 4.66\* |
| Breastfeeding | Yes (ref.) | - | - | - | | - | - | | - |
|  | No | 1.99 | 1.06 - 3.72\* | 0.67 | | 0.14 - 3.23 | 3.08 | | 1.08 - 8.72\* |
| **Block B – Children’s food intake**  Vegetables intake (days) | More than 4 days a week (ref.) | - | - | - | | - | - | | - |
|  | Less than 4 days a week | 1.15 | 0.80 - 1.64 | 2.49 | | 1.10 - 5.61\* | 1.82 | | 0.55 - 5.98 |
| Legumes intake (days) | More than 4 days a week (ref.) | - | - | - | | - | - | | - |
|  | Less than 4 days a week | 0.86 | 0.65 - 1.15 | 1.24 | | 0.67 - 2.28 | 0.88 | | 0.31 - 2.47 |
| Fish intake (days) | More than 4 days a week (ref.) | - | - | - | | - | - | | - |
|  | Less than 4 days a week | 1.48 | 0.93 - 2.36 | 0.98 | | 0.38 - 2.54 | 0.42 | | 0.17 - 1.00 |
| Meat intake (days) | More than 4 days a week (ref.) | - | - | - | | - | - | | - |
|  | Less than 4 days a week | 1.14 | 0.88 - 1.49 | 1.41 | | 0.77 - 2.58 | 0.82 | | 0.39 - 1.70 |
| Soda intake (days) | Less than 4 days a week (ref.) | - | - | - | | - | - | | - |
|  | More than 4 days a week | 1.22 | 0.94 - 1.57 | 1.26 | | 0.60 - 2.61 | 1.17 | | 0.45 - 3.02 |
| Fried food intake (days) | Less than 4 days a week (ref.) | - | - | - | | - | - | | - |
|  | More than 4 days a week | 1.12 | 0.76 - 1.66 | 2.19 | | 0.64 - 7.48 | 2.54 | | 0.80 - 8.04 |

OM/NC, overweight mother and child with normal height; NM/SSC, mother with normal weight and child with short stature; OM/SSC, overweight mother and short-stature child – double burden of malnutrition; OR, odds ratio; 95% CI, 95% confidence interval.

1: Step 2: intra-block regression, variables with p < 0.05

\*p < 0.05.