Supplementary Table 1 Socio-demographic, lifestyle and nutritional characteristics of 6-59 mo. children, by sex, Greater Tunis area 2009/2010 (n 437)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Girls  (*n* 215) | |  | Boys  (*n* 222) | | Girls *v.* Boys |
|  | %\* | SE† |  | %\* | SE† | P-value‡ |
| Age (months) |  |  |  |  |  | 0·66 |
| 6-23 | 27·8 | 3·0 |  | 30·8 | 3·5 |  |
| 24-47 | 44·9 | 3·9 |  | 45·8 | 3·2 |  |
| 48-60 | 27·3 | 3·6 |  | 23·4 | 3·1 |  |
| Wasting |  |  |  |  |  | 0·31 |
| *weight-for-height < -2 z-scores* | 1·1 | 0·01 |  | 2·14 | 0·01 |  |
| Overweight |  |  |  |  |  | 0·64 |
| *BMI-for-age > 2 z-scores* | 9·0 | 0·02 |  | 10·4 | 0·02 |  |
| Obesity |  |  |  |  |  | 0·37 |
| *BMI-for-age > 3 z-scores* | 3·1 | 0·01 |  | 1·7 | 0·01 |  |
| Stunting |  |  |  |  |  | 0·66 |
| *height-for-age< -2 z-scores* | 4·9 | 1·6 |  | 5·9 | 1·5 |  |
| Anaemia |  |  |  |  |  | 0·72 |
| *Hb <110 g/*l | 32·0 | 3·4 |  | 33·6 | 3·0 |  |
| Dietary diversity score |  |  |  |  |  | 0·46 |
| Lower tertile (1-5) | 37·7 | 3·7 |  | 33·9 | 3·3 |  |
| Intermediate tertile (6-7) | 38·4 | 3·5 |  | 44·3 | 3·2 |  |
| Upper tertile (8-11) | 23·9 | 3·4 |  | 21·9 | 2·6 |  |

\*Weighted proportions.

†Standard error taking into account sampling design.

‡P value for girls *v.* boys contrast.

Supplementary Table 2 Multinomial regression: crude or adjusted associations between the categories of the “anaemic child and obese mother” double burden and socio-demographic characteristics, Greater Tunis area 2009/2010 (n 437 child-mother pairs)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Anaemic child and not obese mother\*** | | | | | **Not anaemic child and obese mother\*** | | | | | | | **Anaemic child and obese mother\*** | | | | | | |
|  | **n** | **%**† | **Crude** | | **Adjusted** | | **%** | **Crude** | | | **Adjusted** | | | **%** | **Crude** | | | **Adjusted** | | |
|  | **RPR‡ (95% CI)§** | | **RPRǁ (95% CI)§** | | **RPR‡ (95% CI)§** | | | **RPRǁ (95% CI)§** | | | **RPR‡ (95% CI)§** | | | **RPRǁ (95% CI)§** | | |
| **Child age (months)** |  |  | *P¶* <0·0001 | | *P¶* <0·0001 | |  | *P¶* =0·18 | | | *P¶* =0·57 | | |  | *P¶* <0·0001 | | | *P¶* <0·0001 | | |
| 6-23 | 128 | 33·0 | 13·2 | 5·5, 31·8 | 14·6 | 5·0, 42·5 | 13·0 | 0·7 | 0·3, 1·5 | | 1·0 | 0·5, 2·3 | | 25·0 | 9·1 | 3·7, 22·3 | | 9·8 | 3·6, 26·4 | |
| 24-47 | 197 | 16·7 | 4·9 | 2·1, 11·5 | 5·1 | 2·1, 12·8 | 31·6 | 1·3 | 0·7, 2·4 | | 1·4 | 0·7, 2·6 | | 12·5 | 3·4 | 1·2, 9·3 | | 3·1 | 1·1, 8·5 | |
| 48-60 | 112 | 4·8 | 1 | | 1 | | 34·7 | 1 | | | 1 | | | 5·2 | 1 | | | 1 | | |
| **Child sex** |  |  | *P¶* =0·60 | | *P¶=* 0·93 | |  | *P¶* =0·83 | | | *P¶* =0·82 | | |  | *P¶* =0·92 | | | *P¶=* 0·98 | | |
| Female | 215 | 17·6 | 1 | | 1 | | 26·8 | 1 | | | 1 | | | 14·5 | 1 | | | 1 | | |
| Male | 222 | 19·4 | 1·2 | 0·7, 2·0 | 1·0 | 0·6, 1·8 | 27·0 | 1·1 | | 0·7, 1·7 | 0·9 | 0·6, 1·6 | | 14·2 | 1·0 | 0·6, 1·8 | | 1·0 | 0·5, 1·9 | |
| **Child birth weight** |  |  | *P¶=* 0·61 | | *P¶=* 0·86 | |  | *P¶* =0·18 | | | *P¶=* 0·17 | | |  | *P¶* =0·04 | | | *P¶* =0·03 | | |
| <2500g | 41 | 26·6 | 1·2 | 0·6, 2·5 | 0·9 | 0·4, 2·1 | 19·0 | 0·5 | 0·2, 1·3 | | 0·5 | 0·2, 1·4 | | 5·1 | 0·3 | 0·1, 0·9 | | 0·2 | 0·0, 0·9 | |
| >=2500g | 396 | 17·6 | 1 | | 1 | | 27·7 | 1 | | | 1 | | | 15·3 | 1 | | | 1 | | |
| **Mother age (years)** |  |  | *P¶* =0·35 | | *P¶* =0·52 | |  | *P¶=* 0·15 | | | *P¶=* 0·31 | | |  | *P¶=* 0·42 | | | *P¶=* 0·68 | | |
| 20-29 | 106 | 26·3 | 1·0 | | 1·0 | | 15·5 | 1·0 | | | 1·0 | | | 16·6 | 1·0 | | | 1·0 | | |
| 30-39 | 248 | 17·0 | 0·7 | 0·4, 1·3 | 0·7 | 0·3, 1·4 | 28·8 | 2·0 | 1·0, 4·0 | | 1·7 | 0·8, 3·5 | | 15·3 | 1·0 | 0·5, 1·9 | | 0·8 | 0·4, 1·8 | |
| 40-49 | 83 | 13·9 | 0·5 | 0·2, 1·4 | 0·6 | 0·2, 1·8 | 34·1 | 2·1 | 0·9, 5·3 | | 2·1 | 0·7 | 5·9 | 9·2 | 0·5 | 0·2, 1·7 | | 0·6 | 0·2, 2·0 | |
| **Mother parity** |  |  | *P¶* =0·49 | | *P¶=* 0·10 | |  | *P¶* <0·0001 | | | *P¶* =0·009 | | |  | *P¶=* 0·02 | | | *P¶=* 0·01 | | |
| 1-2 | 264 | 20·3 | 1 | | 1 | | 19·7 | 1 | | | 1 | | | 12·0 | 1 | | | 1 | | |
| ≥ 3 | 173 | 16·3 | 1·2 | 0·7, 2·3 | 1·8 | 0·9, 3·7 | 35·3 | 2·8 | 1·6, 4·7 | | 2·3 | 1·2, 4·3 | | 17·1 | 2·2 | 1·2, 4·2 | | 2·7 | 1·3, 5·7 | |
| **Mother education** |  |  | *P¶* =0·70 | | *P¶=* 0·45 | |  | *P¶=* 0·43 | | | *P¶* =0·94 | | |  | *P¶* =0·38 | | | *P¶=* 0·60 | | |
| No schooling | 38 | 9·5 | 0·4 | 0·1, 1·8 | 0·4 | 0·1, 2·7 | 38·6 | 2·2 | 0·6, 7·8 | | 1·4 | 0·3, 6·9 | | 14·3 | 1·2 | 0·2, 6·3 | | 0·7 | 0·1, 5·4 | |
| Primary school | 175 | 17·3 | 0·8 | 0·3, 2·1 | 1·0 | 0·3, 4·0 | 28·5 | 1·7 | 0·7, 4·1 | | 1·5 | 0·4, 6·2 | | 17·6 | 1·6 | 0·5, 4·7 | | 1·3 | 0·3, 6·8 | |
| Secondary | 179 | 20·1 | 0·8 | 0·3, 2·1 | 1·2 | 0·3, 4·1 | 24·5 | 1·2 | 0·5, 2·9 | | 1·4 | 0·4, 4·7 | | 11·6 | 0·9 | 0·3, 2·7 | | 0·8 | 0·2, 4·0 | |
| University | 45 | 24·8 | 1 | | 1 | | 19·6 | 1 | | | 1 | | | 13·0 | 1 | | | 1 | | |
| **Mother professional activity** |  |  | *P¶* =0·45 | | *P¶ =*0·34 | |  | *P¶* =0·09 | | | *P¶* =0·06 | | |  | *P¶=* 0·66 | | | *P¶=* 0·38 | | |
| Upper/intermediate | 45 | 24·3 | 1 | | 1 | | 23·9 | 1 | | | 1 | | | 12·8 | 1 | | | 1 | | |
| Employee/worker | 76 | 25·8 | 0·9 | 0·3, 2·7 | 0·7 | 0·2, 2·4 | 15·5 | 0·5 | 0·2, 1·3 | | 0·3 | 0·1, 1·0 | | 12·1 | 0·8 | 0·2, 3·1 | | 0·4 | 0·1, 1·6 | |
| Without activity | 316 | 15·9 | 0·7 | 0·3, 1·6 | 0·5 | 0·1, 1·4 | 30·1 | 1·3 | 0·6, 2·8 | | 0·8 | 0·2, 2·5 | | 15·1 | 4·7 | 2·3, 9·6 | | 5·9 | 2·1, 16·5 | |
| **Household economic proxy** |  |  | *P¶* =0·22 | | *P¶=* 0·08 | |  | *P¶=* 0·13 | | | *P¶* =0·30 | | |  | *P¶=* 0·15 | | | *P¶=* 0·17 | | |
| Lower tertile | 159 | 21·4 | 1·6 | 0·9, 3·0 | 2·2 | 1·0, 4·7 | 28·8 | 2·0 | 0·9, 4·2 | | 1·9 | 0·7, 4·9 | | 15·4 | 2·0 | 0·9, 4·4 | | 2·2 | 0·8, 6·1 | |
| Intermediate tertile | 152 | 15·3 | 1·0 | 0·5, 2·2 | 1·2 | 0·5, 2·7 | 30·0 | 1·8 | 0·9, 3·6 | | 1·8 | 0·8, 4·3 | | 16·2 | 1·9 | 0·9, 4·0 | | 2·4 | 0·9, 6·3 | |
| Upper tertile | 126 | 18·9 | 1 | | 1 | | 21·0 | 1 | | | 1 | | | 10·9 | 1 | | | 1 | | |
| **Child dietary diversity score** |  |  | *P¶=* 0·08 | | *P¶* =0·18 | |  | *P¶=* 0·34 | | | *P¶* =0·37 | | |  | *P¶* =0·06 | | | *P¶=* 0·55 | | |
| Lower tertile (1-5) | 155 | 21·9 | 1 | | 1 | | 21·2 | 1 | | | 1 | | | 21·0 | 1 | | | 1 | | |
| Intermediate tertile (6-7) | 186 | 13·4 | 0·5 | 0·2, 0·9 | 0·8 | 0·4, 1·5 | 28·1 | 1·0 | 0·6, 1·8 | | 1·1 | 0·6, 2·0 | | 11·7 | 0·4 | 0·2, 0·9 | | 0·7 | 0·3, 1·5 | |
| Upper tertile (8-11) | 96 | 22·3 | 1·0 | 0·5,2·1 | 1·8 | 0·8, 4·0 | 33·5 | 1·6 | 0·7,3·4 | | 1·7 | 0·8, 3·7 | | 8·7 | 0·4 | 0·2, 1·2 | | 0·6 | 0·2, 2·0 | |
| **Mother energy intake** |  |  | *P¶* =0·93 | | *P¶* =0·99 | |  | *P¶* =0·003 | | | *P¶=* 0·001 | | |  | *P¶* <0·0001 | | | *P¶* =0·004 | | |
| Lower tertile | 148 | 24·0 | 1 | | 1 | | 14·8 | 1 | | | 1 | | | 7·2 | 1 | | | 1 | | |
| Intermediate tertile | 143 | 17·1 | 1·0 | 0·5, 2·0 | 1·0 | 0·5, 2·0 | 29·4 | 2·8 | 1·4, 5·6 | | 3·4 | 1·6, 7·3 | | 15·4 | 3·0 | 1·2, 7·6 | | 3·1 | 1·1, 8·6 | |
| Upper tertile | 146 | 15·2 | 1·1 | 0·6, 2·1 | 1·0 | 0·5, 2·2 | 34·7 | 4·1 | 1·7, 9·8 | | 5·8 | 2·3, 14·9 | | 19·4 |  |  |  |  |  |  |
| **Mother physical activity** |  |  | *P¶* =0·58 | | *P¶=* 0·50 | |  | *P¶=* 0·92 | | | *P¶* =0·12 | | |  | *P¶=* 0·56 | | | *P¶=* 0·62 | | |
| Sedentary (PAL< 1·7) | 103 | 21·0 | 1 | | 1 | | 27·3 | 1 | | | 1 | | | 11·8 | 1 | | | 1 | | |
| Active (PAL≥ 1·7) | 334 | 17·7 | 0·8 | 0·4, 1·6 | 1·0 | 1·0, 1·0 | 26·8 | 1·0 | 0·5, 1·8 | | 1·0 | 1·0, 1·0 | | 15·1 | 1·3 | 0·6, 2·9 | | 1·0 | 1·0, 1·0 | |

PAL: physical activity level.

\* Versus response variable reference category: not anaemic child and not obese mother (anaemia: Hb <110 g/l for children, obese: BMI≥30·0 kg/m2).

**†** Prevalence proportion (weighted estimates). ‡ Relative Prevalence Ratio (*v.* reference category for which RPR = 1), taking into account sampling design.

§ 95% confidence interval taking into account sampling design. ǁ Adjusted for all variables in column 1. *¶* Crude or adjusted P value for multinomial regression models.