**Supplementary material**

**Diet quality and attention capacity in European adolescents: The HELENA study**

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Total number of adolescents in the HELENA study
(n=3528)

Adolescents that did not perform attention capacity assessment
(n=2872)

Adolescents with
attention capacity data
(n=656)

Adolescents without complete dietary data
(n=256)

Adolescents without data for basic confounders
(n=16)

Final sample size
(n=384)

**Figure S1. Final study sample flow chart**

**Table S1**. Association of dietary patterns components with attention capacity in European adolescents1.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Unadjusted(n = 384) |  | Adjusted2(n = 384) |  | Adjusted2  + Physical activity3(n = 215) |
|  | b (95% CI) | β | *P* |  | b (95% CI) | β | *P* |  | b (95% CI) | β | *P* |
| **DQI-A** |  |  |  |  |  |  |  |  |  |  |  |
| Diet quality (%) | 0.11 (0.03, 0.18) | 0.14 | 0.006 |  | 0.12 (0.03, 0.20) | 0.15 | 0.005 |  | 0.15 (0.03, 0.27) | 0.18 | 0.012 |
| Diet diversity (%) | 0.18 (-0.02, 0.39) | 0.09 | 0.075 |  | 0.09 (-0.12, 0.30) | 0.04 | 0.39 |  | -0.02 (-0.30, 0.25) | -0.01 | 0.87 |
| Diet equilibrium (%) | 0.48 (0.21, 0.74) | 0.18 | <0.001 |  | 0.40 (0.13, 0.66) | 0.15 | 0.003 |  | 0.34 (-0.05, 0.73) | 0.11 | 0.090 |
| **Ideal diet score** |  |  |  |  |  |  |  |  |  |  |  |
| Fruits and vegetables (1 vs. 04) | 5.7 (-2.3, 13.7) | 0.07 | 0.16 |  | 4.7 (-3.1, 12.6) | 0.06 | 0.24 |  | 3.1 (-7.2, 13.3) | 0.04 | 0.56 |
| Fish (1 vs. 04) | 4.8 (-1.6, 11.3) | 0.08 | 0.14 |  | 5.6 (-0.9, 12.1) | 0.09 | 0.092 |  | 7.4 (-1.0, 15.8) | 0.12 | 0.083 |
| Fiber rich grains (1 vs. 04) | -0.6 (-7.8, 6.6) | -0.01 | 0.87 |  | -0.2 (-7.4, 7.1) | 0.00 | 0.97 |  | 0.5 (-9.0, 10.1) | 0.01 | 0.91 |
| Sodium (1 vs. 04) | 0.6 (-9.7, 10.8) | 0.01 | 0.92 |  | 11.9 (0.7, 23.1) | 0.12 | 0.037 |  | 8.2 (-5.6, 22.0) | 0.08 | 0.24 |
| Soft drinks (1 vs. 04) | 8.4 (2.7, 14.0) | 0.15 | 0.004 |  | 9.0 (2.6, 15.3) | 0.16 | 0.006 |  | 6.9 (-1.5, 15.4) | 0.12 | 0.11 |
| **Mediterranean diet score**5 |  |  |  |  |  |  |  |  |  |  |  |
| Vegetables (1 vs. 04) | 2.4 (-3.2, 8.1) | 0.04 | 0.40 |  | -0.8 (-6.4, 4.7) | -0.02 | 0.77 |  | 1.3 (-6.3, 8.9) | 0.02 | 0.74 |
| Fruits (1 vs. 04) | 6.1 (0.5, 11.7) | 0.11 | 0.034 |  | 4.7 (-0.7, 10.1) | 0.08 | 0.089 |  | 4.6 (-2.7, 11.9) | 0.08 | 0.22 |
| Cereals (1 vs. 04) | -5.1 (-11.2, 1.0) | -0.09 | 0.10 |  | -6.0 (-12.1, 0.1) | -0.11 | 0.052 |  | -5.5 (-14.0, 3.0) | -0.10 | 0.21 |
| Legumes (1 vs. 04) | 0.9 (-4.9, 6.7) | 0.02 | 0.77 |  | -0.2 (-6.4, 6.0) | 0.00 | 0.96 |  | -4.1 (-12.9, 4.7) | -0.07 | 0.36 |
| Fish (1 vs. 04) | 2.3 (-3.4, 8.0) | 0.04 | 0.43 |  | 1.0 (-5.1, 7.1) | 0.02 | 0.75 |  | -2.9 (-11.3, 5.5) | -0.05 | 0.50 |
| Unsaturated fat to saturated fat ratio (1 vs. 04) | -1.2 (-6.9, 4.4) | -0.02 | 0.66 |  | -2.9 (-8.7, 2.8) | -0.05 | 0.32 |  | -2.3 (-10.3, 5.7) | -0.04 | 0.58 |
| Dairy products (1 vs. 04) | 2.3 (-3.5, 8.0) | 0.04 | 0.44 |  | -1.5 (-7.5, 4.4) | -0.03 | 0.61 |  | -2.0 (-10.3, 6.2) | -0.04 | 0.63 |
| Meat (1 vs. 04) | 5.5 (-0.2, 11.3) | 0.10 | 0.059 |  | 5.0 (-0.6, 10.7) | 0.09 | 0.082 |  | -0.9 (-8.7, 7.0) | -0.02 | 0.83 |
| Alcohol (1 vs. 04) | 5.4 (-1.6, 12.3) | 0.08 | 0.13 |  | 4.3 (-2.5, 11.1) | 0.06 | 0.21 |  | 9.7 (0.8, 18.6) | 0.14 | 0.033 |

DQI-A, Diet Quality Index for adolescents.1 Analyzed using regression analysis. The unstandardized regression coefficient (b) with its 95% confidence interval (CI), the standardized regression coefficient (β) and the *P* value (*P*) are given for each association. 2 Model adjusted for age, sex, body mass index, maternal educational attainment (no university degree vs. university degree), family affluence scale (low/medium/high) and study center (dummy variables).

3 Minutes spent in moderate-to-vigorous physical activity per day. 4 Compares the influence of having 1 point (i.e. more “healthy” intake) versus 0 points (i.e. less “healthy” intake) in the components ideal diet scoreand the Mediterranean diet score. Thus, higher diet quality and diet equilibrium as well as a lower sodium and soft drink consumption was associated with higher attention capacity in adjusted models. 5 All models with components of the Mediterranean diet score were further adjusted for energy intake.

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