Table S1. Intraclass Correlations (ICC) for all food groups.

| Food group | Type |  |  |
| :--- | :---: | :---: | :---: |
|  |  |  | Interpretation <br> according to <br> Cicchetti (1994) |
|  | Agreement | Consistency |  |
|  | $I C C$ | $I C C$ |  |
| Vegetables | .79 | .80 | Excellent |
| Fruit | .92 | .92 | Excellent |
| Grains and starches | .79 | .79 | Excellent |
| Protein | .85 | .85 | Excellent |
| Dairy | .66 | .67 | Good |
| Fats and oils | .50 | .51 | Fair |
| Sugary extras | .82 | .83 | Excellent |

Table S2. Results of the multilevel models to analyse the relationship between perceived meal colour variety and the consumption of seven food
groups across meal types.

| Predictor | Random slopes model (fixed effects) |  |  |  |  | Random intercept model (fixed effects) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $b$ | SE | $t$ | $d f$ | $p$ | $b$ | SE | $t$ | $d f$ | $p$ |
| Model 1: proportion of vegetables |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.141 | 0.006 | 22.51 | 103.05 | <. 001 | 0.141 | 0.006 | 22.59 | 103.170 | <. 001 |
| Perceived meal colour variety | 0.003 | 0.000 | 15.60 | 85.44 | <. 001 | 0.003 | 0.000 | 21.18 | 2705.93 | $<.001$ |
| Model 2: proportion of fruit |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.137 | 0.009 | 15.24 | 101.14 | <. 001 | 0.138 | 0.009 | 15.43 | 97.41 | <. 001 |
| Perceived meal colour variety | -0.002 | 0.000 | -7.39 | 117.26 | <. 001 | -0.003 | 0.000 | -11.08 | 2699.49 | <. 001 |
| Model 3: proportion of grains and starches |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.299 | 0.008 | 36.70 | 102.68 | <. 001 | 0.298 | 0.008 | 36.61 | 102.74 | <. 001 |
| Perceived meal colour variety | 0.001 | 0.000 | 3.36 | 84.94 | <. 001 | 0.001 | 0.000 | 5.60 | 2706.51 | <. 001 |
| Model 4: proportion of protein |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.081 | 0.006 | 14.28 | 104.11 | <. 001 | 0.081 | 0.006 | 14.36 | 103.46 | <. 001 |
| Perceived meal colour variety | 0.002 | 0.000 | 10.02 | 147.57 | <. 001 | 0.001 | 0.000 | 11.39 | 2704.20 | <. 001 |
| Model 5: proportion of dairy |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.125 | 0.006 | 19.77 | 111.82 | <. 001 | 0.125 | 0.006 | 19.77 | 112.08 | <. 001 |
| Perceived meal colour variety | 0.000 | 0.000 | 1.16 | 79.99 | . 250 | 0.000 | 0.000 | 1.50 | 2714.38 | . 135 |
| Model 6: proportion of fats and oils |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.044 | 0.004 | 10.36 | 104.96 | <. 001 | 0.044 | 0.004 | 10.40 | 105.08 | <. 001 |
| Perceived meal colour variety | 0.000 | 0.000 | 1.67 | 84.54 | . 099 | 0.000 | 0.000 | 2.90 | 2707.90 | . 004 |
| Model 7: proportion of sugary extras |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.173 | 0.010 | 17.44 | 117.99 | <. 001 | 0.173 | 0.010 | 17.58 | 116.47 | <. 001 |
| Perceived meal colour variety | -0.004 | 0.000 | -11.97 | 135.99 | <. 001 | -0.004 | 0.000 | -15.43 | 2719.09 | <. 001 |

Table S3. Results of the multilevel models to analyse the relationship between perceived meal colour variety and the consumption of seven food
groups for breakfast.

| Predictor | Random slopes model (fixed effects) |  |  |  |  |  | Random intercept model (fixed effects) |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $b$ | $S E$ | $t$ | $d f$ | $p$ | $b$ | $S E$ | $t$ | $d f$ | $p$ |
| Model 1: proportion of vegetables |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.036 | 0.006 | 6.24 | 89.05 | $<.001$ | 0.037 | 0.006 | 6.60 | 94.76 | $<.001$ |
| Perceived meal colour variety | 0.001 | 0.000 | 4.83 | 74.29 | $<.001$ | 0.001 | 0.000 | 5.98 | 701.11 | $<.001$ |
| Model 2: proportion of fruit |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.163 | 0.015 | 11.04 | 97.69 | $<.001$ | 0.162 | 0.015 | 10.87 | 101.33 | $<.001$ |
| Perceived meal colour variety | 0.000 | 0.000 | 0.60 | 79.71 | .553 | 0.000 | 0.001 | 0.53 | 696.49 | .599 |
| Model 3: proportion of grains and starches |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.371 | 0.014 | 26.01 | 96.61 | $<.001$ | 0.371 | 0.016 | 23.91 | 100.85 | $<.001$ |
| Perceived meal colour variety | -0.002 | 0.001 | -2.99 | 57.14 | .004 | -0.002 | 0.001 | -3.56 | 697.68 | $<.001$ |
| Model 4: proportion of protein |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.066 | 0.010 | 6.90 | 105.86 | $<.001$ | 0.064 | 0.009 | 7.32 | 113.72 | $<.001$ |
| Perceived meal colour variety | 0.002 | 0.000 | 4.63 | 117.06 | $<.001$ | 0.002 | 0.000 | 6.13 | 699.42 | $<.001$ |
| Model 5: proportion of dairy |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.190 | 0.012 | 16.48 | 103.37 | $<.001$ | 0.188 | 0.012 | 15.76 | 104.57 | $<.001$ |
| Perceived meal colour variety | -0.000 | 0.001 | -0.73 | 72.77 | .469 | -0.000 | 0.000 | -0.96 | 701.99 | .339 |
| Model 6: proportion of fats and oils |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.027 | 0.005 | 5.72 | 124.66 | $<.001$ | 0.026 | 0.004 | 5.95 | 139.28 | $<.001$ |
| Perceived meal colour variety | 0.000 | 0.000 | 2.14 | 130.72 | .034 | 0.001 | 0.000 | 2.82 | 701.78 | .005 |
| Model 7: proportion of sugary extras |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.148 | 0.014 | 10.75 | 96.41 | $<.001$ | 0.151 | 0.015 | 10.34 | 88.25 | $<.001$ |
| Perceived meal colour variety | -0.002 | 0.001 | -3.21 | 123.65 | .002 | -0.002 | 0.001 | -2.82 | 701.90 | .005 |

Table S4. Results of the multilevel models to analyse the relationship between perceived meal colour variety and the consumption of seven food groups for lunch.

| Predictor | Random slopes model (fixed effects) |  |  |  |  |  | Random intercept model (fixed effects) |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $b$ | $S E$ | $t$ | $d f$ | $p$ | $b$ | $S E$ | $t$ | $d f$ | $p$ |  |
| Model 1: proportion of vegetables |  |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.259 | 0.016 | 16.64 | 95.58 | $<.001$ | 0.258 | 0.014 | 18.86 | 127.20 | $<.001$ |  |
| Perceived meal colour variety | 0.002 | 0.001 | 4.21 | 78.94 | $<.001$ | 0.002 | 0.000 | 4.94 | 554.47 | $<.001$ |  |
| Model 2: proportion of fruit |  |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.026 | 0.007 | 3.73 | 90.60 | $<.001$ | 0.027 | 0.006 | 4.95 | 98.70 | $<.001$ |  |
| Perceived meal colour variety | -0.000 | 0.000 | -0.85 | 74.37 | .396 | -0.000 | 0.000 | -0.71 | 561.91 | .476 |  |
| Model 3: proportion of grains and starches |  |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.391 | 0.017 | 23.38 | 99.20 | $<.001$ | 0.391 | 0.015 | 25.46 | 127.61 | $<.001$ |  |
| Perceived meal colour variety | -0.001 | 0.000 | -2.72 | 70.69 | .008 | -0.001 | 0.000 | -2.71 | 548.37 | .007 |  |
| Model 4: proportion of protein |  |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.117 | 0.011 | 10.73 | 93.60 | $<.001$ | 0.116 | 0.010 | 11.35 | 135.65 | $<.001$ |  |
| Perceived meal colour variety | 0.000 | 0.000 | 0.03 | 278.22 | .973 | 0.000 | 0.000 | 0.19 | 557.53 | .853 |  |
| Model 5: proportion of dairy |  |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.128 | 0.012 | 10.69 | 97.58 | $<.001$ | 0.129 | 0.010 | 12.75 | 139.50 | $<.001$ |  |
| Perceived meal colour variety | -0.001 | 0.000 | -2.06 | 77.48 | .043 | -0.001 | 0.000 | -2.65 | 563.42 | .008 |  |
| Model 6: proportion of fats and oils |  |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.053 | 0.007 | 7.74 | 92.64 | $<.001$ | 0.053 | 0.007 | 7.41 | 143.73 | $<.001$ |  |
| Perceived meal colour variety | 0.000 | 0.000 | 1.33 | 72.84 | .187 | 0.000 | 0.000 | 1.41 | 563.69 | .158 |  |
| Model 7: proportion of sugary extras |  |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.025 | 0.006 | 3.92 | 110.11 | $<.001$ | 0.025 | 0.007 | 3.65 | 165.94 | $<.001$ |  |
| Perceived meal colour variety | -0.000 | 0.000 | -0.66 | 122.33 | .510 | -0.000 | 0.000 | -1.06 | 563.22 | .290 |  |

Table S5. Results of the multilevel models to analyse the relationship between perceived meal colour variety and the consumption of seven food
groups for dinner.

| Predictor | Random slopes model (fixed effects) |  |  |  |  | Random intercept model (fixed effects) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $b$ | SE | , | $d f$ | $p$ | $b$ | SE | , | $d f$ | $p$ |
| Model 1: proportion of vegetables |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.230 | 0.013 | 17.09 | 106.114 | <. 001 | 0.232 | 0.013 | 17.43 | 123.57 | <. 001 |
| Perceived meal colour variety | 0.003 | 0.000 | 5.41 | 85.99 | <. 001 | 0.002 | 0.000 | 6.06 | 660.00 | <. 001 |
| Model 2: proportion of fruit |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.034 | 0.008 | 4.32 | 108.31 | <. 001 | 0.034 | 0.008 | 4.52 | 98.01 | <. 001 |
| Perceived meal colour variety | -0.000 | 0.000 | -1.48 | 147.43 | . 142 | -0.000 | 0.000 | -1.34 | 635.87 | . 182 |
| Model 3: proportion of grains and starches |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.373 | 0.014 | 26.44 | 106.78 | <. 001 | 0.367 | 0.013 | 28.17 | 124.66 | <. 001 |
| Perceived meal colour variety | -0.002 | 0.001 | -3.91 | 75.93 | <. 001 | -0.002 | 0.000 | -4.07 | 670.79 | $<.001$ |
| Model 4: proportion of protein |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.131 | 0.011 | 11.91 | 106.18 | <. 001 | 0.131 | 0.011 | 11.81 | 122.93 | <. 001 |
| Perceived meal colour variety | 0.001 | 0.000 | 2.31 | 589.23 | . 021 | 0.001 | 0.000 | 2.28 | 660.74 | . 023 |
| Model 5: proportion of dairy |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.128 | 0.011 | 11.95 | 105.51 | <. 001 | 0.129 | 0.010 | 12.96 | 126.45 | <. 001 |
| Perceived meal colour variety | -0.000 | 0.000 | -0.05 | 172.87 | . 958 | -0.000 | 0.000 | -0.41 | 666.83 | . 686 |
| Model 6: proportion of fats and oils |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.050 | 0.007 | 6.85 | 121.83 | < . 001 | 0.050 | 0.007 | 7.08 | 135.31 | <. 001 |
| Perceived meal colour variety | 0.000 | 0.000 | 1.69 | 67.13 | . 096 | 0.000 | 0.000 | 1.71 | 673.67 | . 087 |
| Model 7: proportion of sugary extras |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.053 | 0.011 | 4.75 | 112.66 | <. 001 | 0.056 | 0.009 | 6.07 | 138.24 | <. 001 |
| Perceived meal colour variety | -0.001 | 0.000 | -2.82 | 127.93 | . 006 | -0.001 | 0.000 | -4.54 | 675.60 | <. 001 |

Table S6. Results of the multilevel models to analyse the relationship between perceived meal colour variety and the consumption of seven food
groups as snacks.

| Predictor | Random slopes model (fixed effects) |  |  |  |  | Random intercept model (fixed effects) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $b$ | SE | $t$ | $d f$ | $p$ | $b$ | SE | $t$ | $d f$ | $p$ |
| Model 1: proportion of vegetables |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.057 | 0.009 | 6.56 | 76.17 | <. 001 | 0.058 | 0.008 | 7.51 | 169.10 | <. 001 |
| Perceived meal colour variety | 0.001 | 0.000 | 3.27 | 82.37 | . 002 | 0.001 | 0.000 | 4.14 | 763.35 | <. 001 |
| Model 2: proportion of fruit |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.293 | 0.025 | 11.96 | 67.02 | <. 001 | 0.290 | 0.025 | 11.74 | 131.98 | <. 001 |
| Perceived meal colour variety | -0.002 | 0.001 | -1.83 | 48.00 | . 073 | -0.002 | 0.001 | -2.40 | 763.47 | . 016 |
| Model 3: proportion of grains and starches |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.181 | 0.017 | 10.66 | 70.02 | <. 001 | 0.176 | 0.015 | 12.07 | 132.71 | <. 001 |
| Perceived meal colour variety | 0.003 | 0.001 | 3.66 | 68.89 | <. 001 | 0.002 | 0.001 | 4.11 | 764.76 | <. 001 |
| Model 4: proportion of protein |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.040 | 0.009 | 4.41 | 39.97 | <. 001 | 0.036 | 0.006 | 5.83 | 88.10 | <. 001 |
| Perceived meal colour variety | 0.001 | 0.000 | 3.46 | 31.93 | . 002 | 0.001 | 0.000 | 4.23 | 752.30 | <. 001 |
| Model 5: proportion of dairy |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.088 | 0.012 | 7.17 | 60.86 | <. 001 | 0.087 | 0.012 | 7.55 | 105.59 | <. 001 |
| Perceived meal colour variety | 0.001 | 0.000 | 1.69 | 31.52 | . 101 | 0.001 | 0.000 | 1.72 | 760.32 | . 086 |
| Model 6: proportion of fats and oils |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.041 | 0.010 | 4.08 | 110.26 | <. 001 | 0.041 | 0.011 | 3.61 | 112.70 | <. 001 |
| Perceived meal colour variety | -0.001 | 0.000 | -1.57 | 145.77 | . 118 | -0.000 | 0.000 | -1.51 | 754.44 | . 132 |
| Model 7: proportion of sugary extras |  |  |  |  |  |  |  |  |  |  |
| Intercept | 0.302 | 0.025 | 11.88 | 78.54 | <. 001 | 0.315 | 0.024 | 12.87 | 138.16 | <. 001 |
| Perceived meal colour variety | -0.003 | 0.001 | -3.18 | 51.07 | . 002 | -0.002 | 0.001 | -2.96 | 764.32 | . 003 |

