**Supplementary Materials**

Meal-specific dietary patterns and their contribution to habitual dietary patterns in Iranian population

*Azadeh Lesan1, Kurosh Djafarian, Zahra Akbarzade, Nasim Janbozorgi, Sakineh Shab-Bidar*

**Supplemental Table 1: Mean (SD) of time food intake in eating occasion and mean contribution (% amount in gram) in every eating occasion to the total amount of food consumption**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Eating occasions | Time of meal consumption\* | Percentage amount in gram |
| 1 | Before breakfast | 6:22 ± 0:57 | 3.1 |
| 2 | Breakfast | 8:03 ± 0:43 | 18.25 |
| 3 | Morning snack | 10:28 ± 0:48 | 9.21 |
| 4 | Lunch | 13:53 ± 1:14 | 26.71 |
| 5 | Afternoon snack | 18:02 ± 1:08 | 13.75 |
| 6 | Dinner | 20:45 ± 0:47 | 21.81 |
| 7 | After dinner snack | 22:16 ± 1:29 | 6.17 |

\*Mean ± SD ) standard deviation(

|  |  |  |
| --- | --- | --- |
| Food group code | Name  |  |
| 1 | Breads | White bread, whole grain bread |
| 2 | Rice And Pasta | All pasta and rice |
| 3 | Other Cereals | wheat flour, dough, yeast dough, oat, wheat |
| 4 | Fresh Fruits And Juices | All fruit and fresh fruit juices |
| 5 | Dried Fruits | All dried fruits  |
| 6 | Green Leafy Vegetables | Leafy green vegetables |
| 7 | Red And Orange Vegetables | Tomato, carrot,  |
| 8 | Cabbage Family | Broccoli, cauliflower, cabbage, sauerkraut |
| 9 | Other Vegetables | Mushrooms, peas, corn, sprouts, garlic, onions, fennel, leek, celery, asparagus, bamboo shoots, vegetable mixes |
| 10 | Potato | Potatoes and sweet potatoes |
| 11 | Red Meat | Non-processed meats from: beef, veal, lamb, other red meat  |
| 12 | Poultry | Non-processed meats from: chicken, turkey, duck, goose |
| 13 | Fish | All fish and shellfish |
| 14 | Processed Meat | Sausages, cured ham, salami  |
| 15 | Organ Meat | Liver, heart, kidney of cow, goat, lambs and chicken |
| 16 | Broth | Broth |
| 17 | Egg | Whole egg, egg whites, yolks |
| 18 | Legume | White beans, kidney beans, black beans, other beans, chick peas, lentils |
| 19 | Nut | All nuts and seeds |
| 20 | Cheese | All cheeses |
| 21 | Low Fat Milk & Dairy Products | Low fat milk, dairy beverages, yogurt |
| 22 | High-Fat Milk & Dairy Products | High fat milk, dairy beverages, yogurt, cream |
| 23 | Liquid Vegetable Oils | All vegetable oils  |
| 24 | Solid Oil | Animal oil, hydrogenated oil |
| 25 | Olive oil | Olive oil, olive |
| 26 | Butter | butter |
| 27 | Pickle | All kind of pickles |
| 28 | Salty Snacks | Cracker, chips, cheese puff, corn puff |
| 29 | Sugar And Sweets | Honey, syrups, sugar, jams, chocolate, chocolate bars and candies, caramelized fruits and nuts, marzipan, licorice candy, Cakes, cookies, pancakes and waffles |
| 30 | Industrial Beverages And Juices | Carbonated and non-carbonated soft drinks, industrial fruit juice |
| 31 | Tea | Black tea |
| 32 | Coffee | Coffee and coffee substitute drinks |
| 33 | Herbal Teas | green tea, herbal and fruit infusions |
| 34 | Sauces | Tomato-based sauces, dips and dressings, mayonnaise-based sauces, dessert sauces, other sauces |
| 35 | Spices | Curcumin, cinnamon, pepper |
| 36 | Condiments | Vinegar, mustard, herbs, salt, pepper, artificial sweetener |

**Supplemental Table 2:** List of 36 food groups used throughout the analyses

**Supplementary Table 3.** Factor loading2 on the meal levels.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Food Groups | Breakfast dietary pattern  | Lunch dietary pattern | Afternoon snackdietary pattern | Dinner dietary pattern |
|  | Factor 1  | Factor 2 | Factor 1  | Factor 2 | Factor 1  | Factor 2 | Factor 1  | Factor 2 |
| Breads |  | 0.69 | 0.66 |  | 0.87 |  | 0.42 | -0.32 |
| Rice And Pasta |  |  |  |  |  |  |  | 0.61 |
| Other Cereals | 0.42 |  |  | -0.51 | 0.83 |  |  |  |
| Fresh Fruits And Juices |  |  |  |  |  |  |  |  |
| Dried Fruits |  |  |  |  |  |  |  |  |
| Green Leafy Vegetables |  |  |  | 0.30 |  |  |  | 0.31 |
| Red And Orange Vegetables |  |  |  |  |  |  |  |  |
| Cabbage Family |  |  |  |  |  |  |  |  |
| Other Vegetables |  |  |  | 0.31 |  |  |  |  |
| Cooked Potato |  |  |  | 0.44 |  |  |  |  |
| Red Meat |  |  |  | -0.45 |  |  |  |  |
| Poultry  |  | 0.30 | -0.31 |  |  |  |  | 0.34 |
| Fish |  |  |  |  |  |  |  |  |
| Processed Meat | 0.58 |  | 0.52 |  |  |  | 0.62 |  |
| Organ Meat |  |  |  |  |  |  |  |  |
| Broth |  |  |  | 0.31 |  |  |  |  |
| Egg | 0.68 |  |  | 0.54 | 0.30 | 0.61 |  | -0.31 |
| Legume | 0.34 |  |  |  | 0.32 |  |  | 0.30 |
| Nut |  |  |  |  |  |  |  |  |
| Cheese |  |  |  |  |  |  |  |  |
| Low Fat Milk & Dairy Products |  | 0.52 | -0.32 | 0.52 |  |  |  |  |
| High-Fat Milk & Dairy Products |  |  |  |  |  |  |  |  |
| Liquid Vegetable Oils | 0.81 |  |  | 0.71 | 0.62 | 0.46 | 0.47 | 0.51 |
| Solid Oil |  |  |  | -0.31 |  |  |  | -0.36 |
| Olive oil |  |  |  |  |  |  |  |  |
| Butter | 0.31 |  |  |  | 0.44 |  |  |  |
| Pickle |  |  |  | 0.33 |  |  |  | 0.33 |
| Salty Snacks |  |  |  |  |  |  |  |  |
| Sugar And Sweets |  |  | 0.81 | -0.33 |  | 0.65 | 0.83 | -0.33 |
| Industrial Beverages And Juices |  |  | 0.84 |  |  | 0.70 | 0.83 |  |
| Tea | 0.44 |  |  |  |  | 0.37 |  |  |
| Coffee |  | 0.3 |  |  |  |  |  |  |
| Herbal Teas |  |  |  |  |  |  |  |  |
| Sauces |  |  |  |  |  |  | 0.43 |  |
| Spices |  |  |  |  |  |  |  |  |
| Condiments |  |  |  |  |  |  |  |  |

1 Meal-spesific dietary pattern derived from Principle Component Analysis (PCA).

2factor loading is shown while absolute values ≥0.3.

**Supplemental Figure 1**: Scree plot for the principal component analysis.

