# Maternal Dietary Patterns Are Associated with Pre-Pregnancy Body Mass Index and Gestational Weight Gain: Results from the "Mamma &Bambino" Cohort

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**Supplementary Table 1**. Food grouping used in the dietary pattern analysis.

| **95 FFQ Food Items** | **39 Food Groups** |
|---|---|
| Spirits and other alcoholic drinks | Alcoholic drinks |
| Beer | Beer |
| Butter and margarine | Butter and Margarine |
| Canned fish | Canned fish |
| Cereals | Cereals |
| Coffee | Coffee |
| Cooked vegatables | Cooked vegetables |
| Spinach | |
| Carrots | |
| Peppers | |
| Aubergine | |
| Cauliflower, broccoli | |
| Zucchini, pumpkin | |
| Artichoke | |
| Mushroom | |
| Ketchup | Dipping sauces |
| Mayonnaise | |
| Eggs | Eggs |
| Fish (high in fat) | Fish |
| Fish (medium in fat) | |
| Fish (low in fat) | |
| Fries | Fries |
| Apple | Fruit |
| Pear | |

| | |
|---|---|
| Banana | |
| Peach, nectarine, prune | |
| Apricot | |
| Orange, mandarin | |
| Strawberries | |
| Melon, mango | |
| Watermelon | |
| White grape | |
| Red grape | |
| Pineapple | |
| Cherries | |
| Kiwi | |
| Multivitamin juice | Fruit juice |
| Pineapple juice | |
| Orange juice | |
| Pear juice | |
| Peach juice | |
| Fruit salad | Fruit salad |
| Hard cheeses | Hard cheese |
| Legumes | Legumes |
| Green bean | |
| Peas | |
| Whole milk | Milk |
| Semi-skimmed milk | |
| Skimmed milk | |
| Nuts | Nuts |
| Offal | Offal |
| Olive oil | Olive oil |
| Pasta | Pasta |
| Pizza | Pizza |
| Boiled potatoes | Potatoes |
| Salami | Processed meat |
| Ham (cooked or uncooked) | |
| Bresaola | |
| Fesa, chicken breast | |
| Wurstel pork | |
| Wurstel chicken | |
| Mortadella | |
| Green salad | Raw vegetable |
| Fresh tomatoes | |
| Fennel | |
| Beef, veal, lamb meat | Red meat |

| | |
|---|---|
| Pork meat | |
| Horse meat | |
| Rice | Rice |
| Popcorn, pretzels | Salty snacks |
| Wrapped potato chips | |
| Shellfish | Shellfish |
| Soft cheeses | Soft cheese |
| Soup | Soup |
| Cake, pastries | Sweets |
| Ice cream | |
| Pastry cream, pudding | |
| Chocolate, snack chocolate | |
| Candy | |
| Jam, marmalade | |
| Tea | Tea |
| Vegetable oil | Vegetable oil |
| Brioches | White bread |
| Cookies | |
| Bread | |
| Rusks, crackers | |
| White meat | White meat |
| Wholemeal biscuits | Wholemeal bread |
| Wholemeal bread | |
| Rusks, wholemeal crackers | |
| Red wine | Wine |
| Rosè wine, white wine | |
| Full fat yoghurt | Yoghurt |
| Low fat yoghurt | |
| Water | Not applicable |

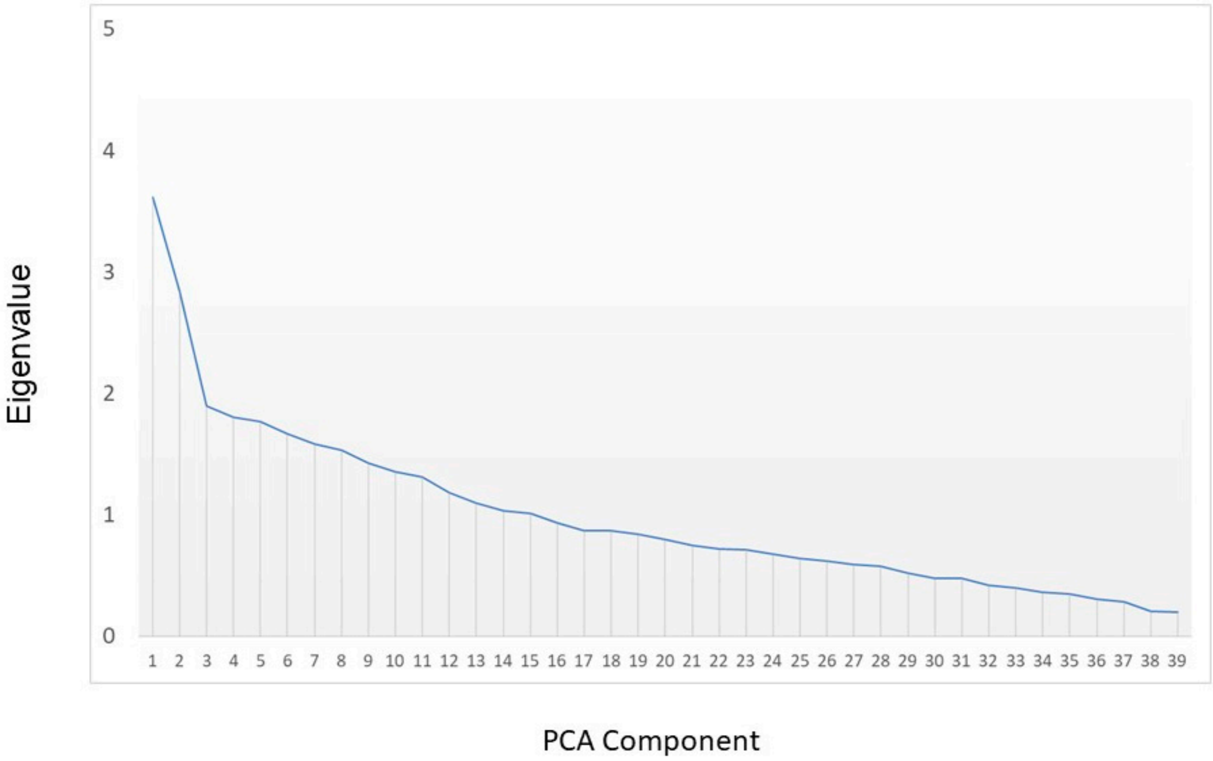
**Supplementary Table 2**. Factor loadings which characterized dietary patterns in two randomly selected subgroups ($n = 100$) from the "Mamma and Bambino" cohort.

| **Food groups** | **Factor Loadings** | | | |
|---|---|---|---|---|
| | **1st sub-sample ($n = 100$)** | | **2nd sub-sample ($n = 100$)** | |
| | **PCA1** | **PCA2** | **PCA1** | **PCA2** |
| **White bread** | **0.200** | 0.112 | 0.170 | 0.182 |
| **Whole-meal bread** | -0.196 | 0.184 | -0.199 | 0.085 |
| **Cereals** | -0.180 | 0.185 | 0.010 | 0.195 |
| **Butter and Margarine** | 0.136 | -0.041 | 0.046 | -0.101 |
| **Milk** | 0.139 | 0.189 | 0.189 | -0.089 |
| **Yogurt** | -0.184 | 0.193 | -0.064 | 0.173 |
| **Olive oil** | 0.186 | 0.087 | 0.086 | 0.187 |
| **Vegetable oil** | 0.182 | -0.093 | 0.134 | -0.191 |
| **Soft cheese** | 0.065 | 0.075 | 0.095 | 0.125 |
| **Hard cheese** | 0.192 | 0.136 | 0.102 | 0.163 |
| **Eggs** | 0.120 | 0.174 | 0.020 | 0.186 |
| **Processed meat** | 0.195 | -0.199 | 0.174 | **-0.201** |
| **Red meat** | **0.509** | 0.086 | **0.534** | -0.036 |
| **White meat** | -0.130 | 0.187 | 0.080 | 0.108 |
| **Offal** | 0.024 | 0.116 | 0.064 | 0.102 |
| **Fish** | -0.191 | 0.195 | -0.198 | 0.200 |
| **Shellfish** | 0.076 | 0.153 | -0.066 | 0.187 |
| **Canned fish** | 0.017 | 0.140 | 0.024 | 0.100 |
| **Fruit** | -0.150 | 0.197 | -0.190 | **0.201** |
| **Fruit salad** | -0.044 | 0.165 | -0.084 | 0.135 |
| **Raw vegetable** | -0.177 | 0.190 | -0.193 | 0.188 |
| **Cooked vegetable** | -0.192 | **0.685** | **-0.200** | **0.775** |
| **Legumes** | -0.079 | **0.572** | -0.188 | **0.492** |
| **Soup** | -0.198 | **0.490** | -0.178 | **0.520** |
| **Potatoes** | -0.098 | **0.261** | -0.140 | **0.321** |
| **Fries** | **0.776** | -0.109 | **0.807** | **-0.203** |
| **Rice** | -0.147 | 0.182 | -0.187 | 0.154 |
| **Pasta** | 0.198 | 0.052 | **0.203** | 0.082 |

| | | | | |
|---|---|---|---|---|
| **Pizza** | -0.011 | **0.423** | 0.021 | **0.233** |
| **Nuts** | 0.022 | 0.163 | 0.104 | 0.104 |
| **Sweets** | 0.195 | 0.012 | **0.205** | 0.078 |
| **Salty snacks** | **0.661** | 0.132 | **0.592** | 0.178 |
| **Dipping sauces** | **0.806** | 0.183 | **0.789** | 0.056 |
| **Wine** | 0.047 | 0.194 | 0.079 | 0.096 |
| **Beer** | 0.108 | -0.035 | 0.124 | 0.076 |
| **Alcoholic drinks** | **0.709** | 0.167 | **0.724** | 0.109 |
| **Coffee** | 0.149 | 0.153 | 0.178 | 0.124 |
| **Tea** | -0.148 | -0.130 | -0.190 | -0.093 |
| **Fruit juice** | 0.095 | 0.093 | 0.109 | 0.089 |

Factor loadings characterizing each dietary pattern (absolute value ≥0.2) are indicated in bold font.

**Supplementary Figure 1**. Scree plot of the eigenvalues.



We used the scree plot examination to determine the appropriate number of dietary patterns. The scree plot represents the partitioning of the total variation (i.e., eigenvalue) accounted for each principal component, against the principal component number.

PCA: principal component analysis.