Supplementary table 1. Foods included in FFQ

|  |  |  |
| --- | --- | --- |
| **Food group** | **Food items** | **Examples** |
| Grains | Cereals | rice, rice congee |
| Rice noodles, noodles |  |
| Pasta | steamed bun, bread roll, pancake |
| Corn and coarse grain | millet, corn, sorghum rice, buckwheat |
| Starchy roots and tubers | potato, sweet potato, purple sweet potato, taro |
| Tofu and soy products | Tofu |  |
| Soy milk |  |
| Other legume products | yuba, tofu sheet, silken tofu, dry tofu |
| Vegetables | Vegetables rich in vitamin A, dark green leafy | green pepper, broccoli, spinach, snow peas, Chinese chives, leaf lettuce, ect. |
| Vegetables rich in vitamin A, orange-yellow leafy | tomato, carrot, pumpkin, ect. |
| Other Vegetables | cucumber, eggplant, celery stalk, white radish, lotus root, sprout, lettuce, onion, asparagus, wax gourd, kidney bean, towel gourd, ect. |
| Fruit | Fruits rich in vitamin A | orange, mango, pawpaw, Hami melon |
| Other fruits | apple, pear, grapefruit, peach, strawberry, grape, banana, Chinese date, kiwi fruit, pitaya, watermelon, pomegranate, persimmon, plum, apricot, pineapple, ect. |
| Algae | Fungus and Seaweed | mushroom, agaric, tremella, nori, kelp, flammulina velutipes, ect. |
| Milk and dairy products | Infant formula |  |
| Ordinary milk powder |  |
| Fresh milk |  |
| Yogurt |  |
| Solid or semi-solid dairy products | cheese |
| Meat | Red meat | Pork, beef, lamb, etc.rou |
| Poultry | chicken, duck, geese, etc |
| Processed meats | sausage, lunchmeat |
| Animal liver, animal blood products |  |
| Aquatic | Fish |  |
| Shrimp and crab |  |
| Other seafood | Jellyfish, shellfish, |
| Eggs | Eggs | eggs, duck eggs, quail eggs, pidan, etc. |
| Snack | Instant noodles |  |
| Pastries | bread, biscuits |
| Candy | chocolate, candy, honey, jam, jelly |
| Nuts | melon seeds, peanuts, walnuts, pistachios, hazelnuts, cashews, etc. |
| Fried and puffed food | chips, crisps, etc. |
| Solid drinks | ice cream, popsicle, etc |
| Beverage | Carbonated drinks | Cola, Sprite, Fanta and other soft drinks |
| Fruit and vegetable juice drinks |  |
| Milk beverages | lactobacillus drink, milky drinks |
| Vegetable protein drink | apricot kernel juice, walnut drink, peanut sauce |
| Sugar-sweetened tea drinks |  |
| Sugar-free drinks |  |

Supplementary Table 2. Factor-loading matrix for the two dietary patterns and their food group

|  |  |  |  |
| --- | --- | --- | --- |
| **Dietary patterns** | **Food group** | **Factor-loading\*** | |
| Traditional meal pattern | Cereals | | 0.324 |
| Corn and coarse grain | | 0.402 |
| Starchy roots and tubers | | 0.438 |
| Tofu | | 0.402 |
| Soy milk | | 0.355 |
| Other legume products | | 0.413 |
| Vegetables rich in vitamin A, dark green leafy | | 0.593 |
| Vegetables rich in vitamin A, orange-yellow leafy | | 0.629 |
| Other Vegetables | | 0.603 |
| Fruits rich in vitamin A | | 0.573 |
| Other fruits | | 0.535 |
| Fungus, and Seaweed | | 0.522 |
| Red meat | | 0.439 |
| Poultry | | 0.478 |
| Fish | | 0.384 |
| Shrimp and crab | | 0.416 |
| Other seafood | | 0.317 |
| Eggs | | 0.332 |
| Nuts | | 0.34 |
| Snacking food pattern | Processed meats | | 0.454 |
| Instant noodles | | 0.407 |
| Pastries | | 0.344 |
| Candy | | 0.478 |
| Nuts | | 0.355 |
| Fried and puffed food | | 0.576 |
| Solid drinks | | 0.488 |
| Carbonated drinks | | 0.513 |
| Fruit and vegetable juice drinks | | 0.423 |
| Milk beverages | | 0.452 |
| Vegetable protein drinks | | 0.433 |
| Sugar-sweetened tea drinks | | 0.51 |
| Sugar-free drinks | | 0.312 |

**\***Factor loading of >|0.30| was included to represent the food strongly associated with the identified factor; absolute values <0.30 are excluded from the table for simplicity.

Supplementary Table 3. Univariate and multivariate logistic regression for ow/ob in Chinese children aged 2-6 years

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Parameters** | **WHO criteria** | | **IOTF criteria** | | **Chinese criteria** | |
| cOR (95%CI) | aOR (95%CI)# | cOR (95%CI) | aOR (95%CI) # | cOR (95%CI) | aOR (95%CI) # |
| Age group (month) |  |  |  |  |  |  |
| 24-35 | 1 | 1 | 1 | 1 | 1 |  |
| 36-47 | 1.55(1.02-2.37) \* | 1.56(1.01-2.41) \* | 1.64(1.13-2.38) \*\* | 1.70(1.56-2.49) \*\* | 1.53(1.21-1.94) \*\*\* | 1.56(1.22-1.99) \*\*\* |
| 48-59 | 1.45(0.95-2.12) | 1.45(0.94-2.24) | 2.30(1.62-3.26) | 2.39(1.66-3.44) \*\*\* | 1.76(1.40-2.20) \*\*\* | 1.81(1.42-2.29) \*\*\* |
| 60-71 | 7.55(5.27-10.81) \*\*\* | 7.82(5.36-11.43) \*\*\* | 4.26(3.06-5.92) \*\*\* | 4.52(3.18-6.41) \*\*\* | 2.41(1.94-3.00) \*\*\* | 2.46(1.94-3.12) \*\*\* |
| 72-83 | 10.64(6.76-16.76) \*\*\* | 11.29(6.98-18.26) \*\*\* | 4.39(2.71-7.12) \*\*\* | 5.58(2.77-7.60) \*\*\* | 2.92(2.05-4.15) \*\*\* | 3.10(2.13-4.51) \*\*\* |
| Sex |  |  |  |  |  |  |
| Girls | 1 | 1 | 1 | 1 | 1 | 1 |
| Boys | 2.00(1.65-2.44) \*\*\* | 1.87(1.52-2.29) \*\*\* | 1.31(1.09-1.58) \*\* | 1.21(1.00-1.47) | 1.90(1.65-2.19) \*\*\* | 1.82(1.57-2.10) \*\*\* |
| Children’s birth weight (g) |  |  |  |  |  |  |
| 2500-3999 | 1 | 1 | 1 | 1 | 1 | 1 |
| <2500 | 0.67(0.36-1.23) | 0.71(0.38-1.34) | 0.78(0.44-1.37) | 0.81(0.46-1.45) | 0.58(0.37-0.92) \* | 0.61(0.38-0.98) \* |
| ≥4000 | 2.15(1.63-2.83) \*\*\* | 1.54(1.14-2.08) \*\* | 1.96(1.48-2.61) \*\*\* | 1.44(1.07-1.94) \* | 2.32(1.88-2.86) \*\*\* | 1.75(1.40-2.18) \*\*\* |
| Mode of delivery |  |  |  |  |  |  |
| Vaginal | 1 | 1 | 1 | 1 | 1 | 1 |
| Caesarean | 1.43(1.19-1.73) \*\*\* | 1.25(1.03-1.53) \* | 1.52(1.26-1.83) \*\*\* | 1.31(1.08-1.59) \*\* | 1.33(1.16-1.53) \*\*\* | 1.18 (1.03-1.37) \* |
| Children’s screen time (hours/day) |  |  |  |  |  |  |
| <1 | 1 | 1 | 1 | 1 | 1 | 1 |
| ≥1 | 1.70(1.38-2.08) \*\*\* | 1.10(0.88-1.37) | 1.50(1.23-1.83) \*\*\* | 1.06(0.86-1.32) | 1.36(1.18-1.56) \*\*\* | 1.06(0.91-1.24) |
| Children’s outdoor activity (hours/day) |  |  |  |  |  |  |
| <1 | 1 | 1 | 1 | 1 | 1 | 1 |
| ≥1 | 1.17(0.97-1.41) | 1.12(0.92-1.36) | 1.18(0.98-1.42) | 1.16(0.96-1.40) | 1.29(1.12-1.48) \*\*\* | 1.24(1.08-1.43) \*\*\* |
| Children’s snacking food pattern |  |  |  |  |  |  |
| Q1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Q2 | 0.98(0.74-1.29) | 0.90(0.67-1.21) | 0.99(0.75-1.30) | 0.91(0.68-1.20) | 1.18(0.97-1.44) | 1.14(0.93-1.40) |
| Q3 | 1.04(0.79-1.37) | 0.93(0.69-1.23) | 1.07(0.81-1.40) | 0.94(0.71-1.24) | 1.21(0.99-1.48) | 1.13(0.92-1.39) |
| Q4 | 1.55(1.20-1.99) \*\*\* | 1.38(1.05-1.81) \* | 1.46(1.13-1.89) \*\*\* | 1.27(0.97-1.65) | 1.44(1.19-1.74) \*\*\* | 1.32(1.08-1.61) \*\* |
| Residence |  |  |  |  |  |  |
| Rural | 1 | 1 | 1 | 1 | 1 | 1 |
| Urban | 1.33(1.10-1.60) \*\*\* | 1.34(1.06-1.69) \* | 1.47(1.22-1.77) \*\*\* | 1.46(1.17-1.83) \*\* | 1.36(1.19-1.56) \*\*\* | 1.39(1.17-1.63) \*\*\* |
| Father’s age (years) |  |  |  |  |  |  |
| <30 | 1 | 1 | 1 | 1 | 1 | 1 |
| 30-35 | 1.42(1.09-1.84) \*\* | 1.00(0.74-1.37) | 1.53(1.18-1.99) \*\*\* | 1.22 (0.90-1.64) | 1.29(1.08-1.55) \*\* | 1.06(0.86-1.32) |
| ≥35 | 1.67(1.28-2.17) \*\*\* | 0.91(0.61-1.35) | 1.68(1.28-2.19) \*\*\* | 1.03(0.70-1.52) | 1.29(1.07-1.55) \*\* | 0.87(0.66-1.15) |
| Mother’s age (years) |  |  |  |  |  |  |
| <30 | 1 | 1 | 1 | 1 | 1 | 1 |
| 30-35 | 1.19(0.91-1.55) | 0.97(0.71-1.33) | 1.08(0.83-1.39) | 0.89(0.66-1.19) | 1.07(0.89-1.29) | 0.98(0.79-1.22) |
| ≥35 | 1.44(1.10-1.89) \*\* | 1.07(0.73-1.58) | 1.28(0.99-1.66) | 0.98(0.67-1.41) | 1.11(0.92-1.34) | 1.00(0.76-1.32) |
| GDM |  |  |  |  |  |  |
| No | 1 | 1 | 1 | 1 | 1 | 1 |
| Yes | 1.53(0.97-2.39) | 1.42(0.88-2.32) | 1.92(1.27-2.90) \*\*\* | 1.68(1.09-2.59) \* | 1.54(1.09-2.15) \* | 1.32(0.92-1.88) |
| Prepregnancy weight (kg) |  |  |  |  |  |  |
| <50 | 1 | 1 | 1 | 1 | 1 | 1 |
| 50-55 | 1.48(1.15-1.91) \*\*\* | 1.27(0.97-1.68) | 1.34(1.04-1.74) \*\* | 1.16(0.88-1.53) | 1.52(1.27-1.82) \*\*\* | 1.32(1.08-1.61) \*\* |
| ≥55 | 2.15(1.71-2.72) \*\*\* | 1.48(1.10-2.00) \* | 2.39(1.90-3.14) \*\*\* | 1.63(1.22-2.18) \*\*\* | 2.21(1.86-2.62) \*\*\* | 1.50(1.21-1.86) \*\*\* |
| Predelivery weight (kg) |  |  |  |  |  |  |
| <65 | 1 | 1 | 1 | 1 | 1 | 1 |
| 65-70 | 1.59(1.24-2.04) \*\*\* | 1.33(1.00-1.76) | 1.71(1.33-2.20) \*\*\* | 1.36(1.03-1.81) \* | 1.63(1.36-1.95) \*\*\* | 1.37(1.12-1.69) \*\*\* |
| ≥70 | 2.35(1.89-2.92) \*\*\* | 1.90(1.43-2.54) \*\*\* | 2.60(2.09-3.25) \*\*\* | 1.79(1.35-2.38) \*\*\* | 2.46(2.09-2.89) \*\*\* | 1.80(1.47-2.22) \*\*\* |

Note: Results of univariate and multivariate logistic regression analyses in various significant factors. Analyses with complete data. cOR, crude odds ratio. aOR, adjusted odds ratio. CI, confidence interval. GDM: gestational diabetes mellitus. Q: quartile. ⁎p < 0.05. \*\*p < 0.01. ⁎⁎⁎ p < 0.005. #adjusts for all variables with p <0.05 in the chi-squared test.