

Table S1 Food grouping used in dietary pattern analysis

Food Groups	Food Groups
Rice and Products	rice and products
Wheat and Products	wheat and products
Other Cereals	corn and products, buckwheat, millet
Fungi and Algae	mushrooms, black fungus, white fungus, kelp, seaweed, nori
Tubers	potatoes, taro, sweet potatoes
Dry Legume	mung beans, red beans, kidney beans
Legume Products	soybeans, soy milk, tofu pudding, Tofu, bean curd sheets, shredded tofu
Vegetables	vegetables
Fruits	fruits
Nuts	sunflower seeds, peanuts, walnuts, etc
Pork	pork
Other Red Meats	beef, lamb, donkey meat, etc
Meat Products and Offal	meat products, animal offal
Poultry	poultry
Aquatic Products	fish, shrimp, crab, mollusks, etc
Eggs	fresh eggs, salted eggs, century eggs
Milk and Dairy Products	milk, milk powder, yogurt, cheese
Liquors	Chinese spirits, beer, rice wine, grape wine
Beverages	carbonated beverages, fruit and vegetable juice drinks, coffee, etc
Snacks	snacks

Table S2 Characteristics of subjects according to Dietary Pattern scores quartile distribution

	Q1 N=9162	Q2 N=9162	Q3 N=9162	Q4 N=9162	P-value	P-trend
Oriental traditional Pattern						
Female (n, %)	5113(55·8)	5149(56·2)	4955(54·1)	4765(52·0)	<0·001	<0·001
Age (Median,Q1, Q3,y)	59·2(51·8;65·9)	58·4(51·3;64·8)	58·3(51·5;64·9)	58·3(51·4;64·6)	<0·001	<0·001
Age group (n, %)					<0·001	<0·001
45-59 y	4856(53·0)	5120(55·9)	5165(56·4)	5156(56·2)		
60-74 y	3714(40·5)	3620(39·5)	3624(39·6)	3644(39·8)		
≥75 y	592(6·5)	422(4·6)	373(4·0)	362(4·0)		
Rural (n, %)	6636(72·4)	5839(63·7)	5117(55·9)	4396(48·0)	<0·001	<0·001
Income (n, %)					<0·001	<0·001
<5000 Yuan/month	7792(85·1)	7396(80·7)	7142(78·0)	6651(72·6)		
5000-9999 Yuan/month	1037(11·3)	1376(15·0)	1553(17·0)	1973(21·5)		
≥10000 Yuan/month	333(3·6)	390(4·3)	467(5·0)	538(5·9)		
Han ethnicity (n, %)	7781(84·9)	8290(90·5)	8514(92·9)	8706(95·0)	<0·001	<0·001
Educational level (n, %)					<0·001	<0·001
Below junior high school	6507(71·0)	5746(62·7)	4798(52·4)	3746(40·9)		
Junior high school	2531(27·6)	3231(35·3)	3986(43·5)	4778(52·1)		
Senior high school or above	124(1·4)	185(2·0)	378(4·1)	638(7·0)		
Having a partner (n, %)	8524(93·0)	8641(94·3)	8715(95·1)	8739(95·4)	<0·001	<0·001
Adequate physical activity (n, %)	8326(90·9)	8254(90·1)	8073(88·1)	8090(88·3)	<0·001	<0·001
Smoking (n, %)	2567(28·0)	2418(26·4)	2416(26·4)	2310(25·2)	<0·001	<0·001
Drinking (n, %)	3021(33·0)	3127(34·1)	3311(36·1)	3672(40·1)	<0·001	<0·001
BMI(Median, P25th, P75th,kg/m ²)	23·2(21·1;25·6)	23·9(21·7;26·3)	24·5(22·2;26·7)	24·8(22·6;27·1)	<0·001	<0·001
BMI group (n, %)					<0·001	<0·001
Underweight	459(5·0)	333(3·6)	206(2·3)	166(1·8)		
Normal weight	4928(53·8)	4337(47·3)	3860(42·1)	3561(38·9)		
Overweight	2899(31·6)	3249(35·5)	3687(40·2)	3753(41·0)		
Obesity	876(9·6)	1243(13·6)	1409(15·4)	1682(18·3)		
Family history of chronic diseases (n, %)	3029(33·1)	3934(42·9)	4586(50·1)	5154(56·3)	<0·001	<0·001
Diabetes Mellitus (n, %)	819(8·9)	922(10·1)	1096(12·0)	1146(12·5)	<0·001	<0·001
FPG(Median, P25th, P75th,mmol/L)	5·2(4·8;5·7)	5·3(4·9;5·8)	5·3(4·9;5·8)	5·3(4·9;5·8)	<0·001	<0·001
HbA1c (mean, std)	5·1(0·9)	5·1(1·0)	5·2(1·0)	5·2(1·0)	<0·001	<0·001
Animal-based Pattern						
Female (n, %)	5209(56·9)	5711(62·3)	5115(55·8)	3947(43·1)	<0·001	<0·001
Age (Median,Q1, Q3,y)	57·9(51·2;64·4)	59·2(51·8;65·8)	59·2(51·8;65·8)	58·1(51·1;64·0)	<0·001	0·608
Age group (n, %)					<0·001	0·911
45-59 y	5297(57·8)	4850(52·9)	4852(53·0)	5298(57·8)		
60-74 y	3544(38·7)	3761(41·0)	3768(41·1)	3529(38·5)		
≥75 y	321(3·5)	551(6·1)	542(5·9)	335(3·7)		

Rural (n, %)	6241(68·1)	5048(55·1)	5119(55·9)	5580(60·9)	<0·001	<0·001
Income (n, %)					<0·001	<0·001
<5000 Yuan/month	8039(87·7)	7166(78·2)	6848(74·7)	6928(75·6)		
5000-9999 Yuan/month	923(10·1)	1581(17·3)	1773(19·4)	1662(18·2)		
≥10000 Yuan/month	200(2·2)	415(4·5)	541(5·9)	572(6·2)		
Han ethnicity (n, %)	8181(89·3)	8440(92·1)	8420(91·9)	8250(90·0)	<0·001	0·13
Educational level (n, %)					<0·001	<0·001
Below junior high school	5476(59·8)	4945(54·0)	5215(56·9)	5161(56·3)		
Junior high school	3499(38·2)	3834(41·8)	3540(38·6)	3653(39·9)		
Senior high school or above	187(2·0)	383(4·2)	407(4·5)	348(3·8)		
Having a partner (n, %)	8653(94·4)	8559(93·4)	8655(94·5)	8752(95·5)	<0·001	<0·001
Adequate physical activity (n, %)	8039(87·7)	8040(87·8)	8239(89·9)	8425(92·0)	<0·001	<0·001
Smoking (n, %)	2224(24·3)	1994(21·8)	2359(25·7)	3134(34·2)	<0·001	<0·001
Drinking (n, %)	2681(29·3)	2992(32·7)	3392(37·0)	4066(44·4)	<0·001	<0·001
BMI(Median, P25th, P75th,kg/m²)	24·4(22·1;26·9)	24·5(22·2;26·9)	23·9(21·7;26·3)	23·6(21·5;25·9)	<0·001	<0·001
BMI group (n, %)					<0·001	<0·001
Underweight	254(2·8)	258(2·8)	307(3·4)	345(3·8)		
Normal weight	3872(42·3)	3823(41·7)	4352(47·5)	4639(50·6)		
Overweight	3504(38·2)	3555(38·8)	3341(36·4)	3188(34·8)		
Obesity	1532(16·7)	1526(16·7)	1162(12·7)	990(10·8)		
Family history of chronic diseases						
(n, %)	4384(47·8)	4486(49·0)	4186(45·7)	3647(39·8)	<0·001	<0·001
Diabetes Mellitus (n, %)	904(9·9)	1183(12·9)	991(10·8)	905(9·9)	<0·001	0·156
FPG(Median, P25th, P75th,mmol/L)	5·2(4·8;5·7)	5·3(4·9;5·8)	5·3(4·9;5·8)	5·3(4·9;5·8)	<0·001	<0·001
HbA1c (mean, std)	5·1(0·9)	5·2(1·0)	5·14(1·0)	5·1(0·9)	<0·001	0·706
Plant-based Pattern						
Female (n, %)	5350(58·4)	5312(58·0)	4884(53·3)	4436(48·4)	<0·001	<0·001
Age (Median,Q1, Q3,y)	60·6(53·0;66·6)	59·3(51·9;65·6)	58·0(51·2;64·4)	56·1(50·4;63·0)	<0·001	<0·001
Age group (n, %)					<0·001	<0·001
45-59 y	4354(47·5)	4838(52·8)	5283(57·7)	5822(63·5)		
60-74 y	4224(46·1)	3815(41·6)	3531(38·5)	3032(33·1)		
≥75 y	584(6·4)	509(5·6)	348(3·8)	308(3·4)		
Rural (n, %)	6485(70·8)	5570(60·8)	5167(56·4)	4766(52·0)	<0·001	<0·001
Income (n, %)					<0·001	<0·001
<5000 Yuan/month	7898(86·2)	7434(81·1)	7085(77·4)	6564(71·6)		
5000-9999 Yuan/month	989(10·8)	1345(14·7)	1635(17·8)	1970(21·5)		
≥10000 Yuan/month	275(3·0)	383(4·2)	442(4·8)	628(6·9)		
Han ethnicity (n, %)	8327(90·9)	8433(92·0)	8428(92·0)	8103(88·4)	<0·001	<0·001
Educational level (n, %)					<0·001	<0·001
Below junior high school	6531(71·3)	5525(60·3)	4782(52·2)	3959(43·2)		
Junior high school	2523(27·5)	3410(37·2)	4013(43·8)	4580(50·0)		
Senior high school or above	108(1·2)	227(2·5)	367(4·0)	623(6·8)		
Having a partner (n, %)	8549(93·3)	8612(94·0)	8703(95·0)	8755(95·6)	<0·001	<0·001

Adequate physical activity (n, %)	8362(91·3)	8122(88·6)	8149(88·9)	8110(88·5)	<0·001	<0·001
Smoking (n, %)	2241(24·5)	2276(24·8)	2510(27·4)	2684(29·3)	<0·001	<0·001
Drinking (n, %)	2525(27·6)	2934(32·0)	3501(38·2)	4171(45·5)	<0·001	<0·001
BMI(Median, P25th, P75th,kg/m²)	23·5(21·3;25·9)	24·0(21·8;26·4)	24·3(22·1;26·6)	24·6(22·4;27·0)	<0·001	<0·001
BMI group (n, %)					<0·001	<0·001
Underweight	403(4·4)	313(3·4)	247(2·7)	201(2·2)		
Normal weight	4698(51·3)	4249(46·4)	3973(43·4)	3766(41·1)		
Overweight	3047(33·3)	3330(36·3)	3582(39·1)	3629(39·6)		
Obesity	1014(11·0)	1270(13·9)	1360(14·8)	1566(17·1)		
Family history of chronic diseases						
(n, %)	3324(36·3)	3928(42·9)	4488(49·0)	4963(54·2)	<0·001	<0·001
Diabetes Mellitus (n, %)	984(10·7)	1079(11·8)	948(10·3)	972(10·6)	0·011	0·21
FPG(Median, P25th, P75th,mmol/L)	5·4(4·9;5·8)	5·3(4·9;5·8)	5·3(4·9;5·8)	5·2(4·9;5·7)	<0·001	<0·001
HbA1c (mean, std)	5·1(1·0)	5·2(1·0)	5·1(1·0)	5·1(1·0)	0·161	0·165

Table S3 The food and nutrient intake of the highest-scoring group (Q4) in the three dietary patterns

	Plant-based Pattern	Oriental traditional Pattern	Animal-based Pattern
Meat products and offal ^d (g)	2·6	3·3	5·8
Dry legume ^d (g)	8·5	3·1	3·6
Poultry ^d (g)	9·8	15·2	13·7
Beverages ^d (g)	11	13·8	28·7
Snacks ^{bc} (g)	11·2	9·76	22·2
Other red meats ^d (g)	11·7	6·5	23
Nuts ^d (g)	14·1	8·3	24
Aquatic products ^d (g)	27·4	49·4	31·4
Fungi and algae ^d (g)	27·9	16·5	20·9
Legume products ^d (g)	28·5	15·7	17·4
Liquors ^{ac} (g)	43·4	76·6	76·8
Pork ^d (g)	46·1	99·5	58·4
Other cereals ^d (g)	50·2	7·53	19·4
Eggs ^d (g)	53·6	33	44·4
Tubers ^d (g)	80	26·4	65
Milk and dairy products ^d (g)	93·2	40·5	113
Rice and products ^d (g)	130	378	142
Fruits ^{ab} (g)	166	97	166
Wheat and products ^d (g)	182	38·9	151
Vegetables ^d (g)	416	446	304
Vitamin b6 ^{ab} (mg)	0·04	0·03	0·04
Vitamin b12 ^{ac} (ug)	0·04	0·09	0·06
Riboflavin ^d (mg)	1·01	1·12	1·04
Thiamin ^d (mg)	1·14	1·12	1·14
Cu ^{ab} (mg)	2·38	2·3	2·46
I ^d (mg)	6·03	6·27	5·36
Mn ^{bc} (mg)	6·84	7·35	6·72
Zn ^d (mg)	12·6	15·1	13·4
Fiber ^d (g)	15·9	13·5	14·8
Niacin ^d (mg)	17·4	23·5	19·2
Fe(mg)	28·3	31·9	27·9
Vitamin e ^{ab} (mg)	46·9	39·4	49·2
Se ^{bc} (ug)	59·7	64·8	63
Protein ^d (g)	81·3	91	84·7
Fat ^d (g)	91·2	114	99·7
PUFA ^d (g)	110	122	112
Vitamin c ^d (mg)	118	128	112
MUFA ^d (g)	142	190	156
SFA ^d (g)	182	198	195
Cholesterol ^d (mg)	192	304	231
Retinol ^c (ug)	200	218	236

Folate ^d (ug)	270	269	254
Carbohydrate ^d (mg)	335	321	332
Mg ^d (mg)	383	404	367
Ca ^d (mg)	516	552	501
Vitamin a ^{ab} (ug)	580	741	611
P(mg)	1235	1306	1240
K ^a (mg)	2255	2321	2240
Carotene ^d (ug)	2280	3142	2249
Na(mg)	2381	4214	2338
Energy ^d (Kcal)	2448	2676	2541

a: There are significant differences between the Plant-based Pattern and the Oriental traditional Pattern.

b: There are significant differences between the Oriental traditional Pattern and the Animal-based Pattern.

c: There are significant differences between the Plant-based Pattern and the Animal-based Pattern.

d: There are significant differences among the three dietary patterns.

Table S4 The correlation between the three dietary patterns and food as well as nutrient intake

	Plant-based Pattern	Oriental traditional Pattern	Animal-based Pattern
Rice And Products	-0.26	0.77	-0.30
Wheat And Products	0.49	-0.53	0.33
Other Cereals	0.54	-0.34	0.13
Fungi And Algae	0.53	0.19	0.34
Tubers	0.42	-0.25	0.25
Dry Legume	0.39	0.05	0.09
Legume Products	0.57	0.12	0.18
Vegetables	0.35	0.44	-0.08
Fruits	0.47	0.06	0.45
Nuts	0.21	0.02	0.43
Pork	0.03	0.56	0.12
Other Red Meats	0.24	0.05	0.45
Meat Products And Offal	0.04	0.19	0.33
Poultry	0.13	0.37	0.30
Aquatic Products	0.18	0.54	0.22
Eggs	0.52	0.08	0.32
Milk And Dairy Products	0.28	-0.03	0.33
Liquors	0.09	0.17	0.18
Beverages	-0.01	0.14	0.26
Snacks	0.12	0.13	0.41
MUFA	-0.04	0.32	0.04
PUFA	0.04	0.12	0.03
SFA	0.06	0.17	0.12
Ca	0.15	0.21	0.06
Carbohydrate	0.15	-0.08	0.07
Cholesterol	-0.09	0.44	0.08
Cu	0.16	0.05	0.13
Diet Fiber	0.26	-0.07	0.13
Energy	0.07	0.14	0.08
Fat	-0.04	0.27	0.05
Fe	0.13	0.11	0.10
Folate	0.17	0.16	0.04
I	0.00	0.12	0.02
K	0.19	0.13	0.15
Mg	0.22	0.01	0.11
Mn	0.07	0.07	0.03
Na	0.10	0.12	0.11
Niacin	-0.06	0.40	0.04
P	0.17	0.13	0.14
Protein	0.12	0.21	0.15
Retinol	0.13	0.21	0.18

Riboflavin	0·13	0·25	0·14
Se	0·17	0·10	0·22
Thiamin	0·17	0·01	0·13
Carotene	-0·02	0·29	-0·07
Vitamin A	0·02	0·31	0·00
Vitamin B6	0·10	0·03	0·10
Vitamin B12	0·01	0·07	0·04
Vitamin C	0·07	0·19	-0·03
Vitamin E	0·13	-0·11	0·10
Zn	0·03	0·28	0·07

Q1	1	0.96	Q1	1	1.02	Q1	1	0.97
Q2	1.00(0.87,1.15)	0.15	Q2	1.23(1.07,1.42)	0.50	Q2	1.04(0.91,1.19)	0.27
Q3	1.16(1.01,1.34)		Q3	1.04(0.89,1.20)		Q3	0.90(0.78,1.04)	
Q4	1.07(0.92,1.24)		Q4	1.15(0.99,1.33)		Q4	0.83(0.71,0.96)	
Family history of chronic diseases(Yes)								
Q1	1		Q1	1		Q1	1	
Q2	0.97(0.83,1.12)		Q2	1.24(1.09,1.41)		Q2	0.94(0.82,1.08)	
Q3	1.00(0.86,1.15)		Q3	1.18(1.03,1.34)		Q3	0.75(0.66,0.87)	
Q4	0.97(0.84,1.12)		Q4	1.13(0.98,1.30)		Q4	0.79(0.69,0.91)	
BMI(<18·5 kg/m²)								
Q1	1	0.98	Q1	1	1.02	Q1	1	1.02
Q2	1.09(0.51,2.34)	0.35	Q2	2.04(0.74,5.65)	0.43	Q2	1.34(0.66,2.71)	0.31
Q3	1.18(0.50,2.79)		Q3	1.38(0.48,3.93)		Q3	0.61(0.24,1.53)	
Q4	1.14(0.43,3.01)		Q4	2.13(0.81,5.59)		Q4	0.37(0.12,1.21)	
BMI(18·5-23·9 kg/ m²)								
Q1	1		Q1	1		Q1	1	
Q2	1.08(0.92,1.28)		Q2	1.20(1.01,1.43)		Q2	1.12(0.96,1.31)	
Q3	1.08(0.91,1.29)		Q3	1.02(0.86,1.22)		Q3	0.78(0.65,0.93)	
Q4	1.13(0.94,1.35)		Q4	1.15(0.96,1.37)		Q4	0.82(0.68,0.98)	
BMI(24·0- 27·9 kg/ m²)								
Q1	1		Q1	1(1,1)		Q1	1	
Q2	0.88(0.75,1.03)		Q2	1.26(1.09,1.45)		Q2	0.93(0.80,1.08)	
Q3	1.01(0.86,1.17)		Q3	1.15(0.99,1.34)		Q3	0.83(0.72,0.96)	
Q4	0.92(0.79,1.07)		Q4	1.10(0.94,1.28)		Q4	0.79(0.67,0.92)	
BMI(≥ 28·0 kg/m²)								
Q1	1		Q1	1		Q1	1	

Drink(No)	Q2	1.04(0.83,1.31)		Q2	1.22(1.02,1.47)		Q2	0.92(0.75,1.13)	
	Q3	1.15(0.93,1.44)		Q3	1.15(0.94,1.41)		Q3	0.85(0.69,1.04)	
	Q4	1.08(0.87,1.34)		Q4	1.20(0.97,1.49)		Q4	0.86(0.70,1.06)	
	Q1	1	1.02	Q1	1	1.03	Q1	1	1.02
Drink(Yes)	Q2	0.96(0.85,1.08)	0.60	Q2	1.24(1.11,1.39)	0.44	Q2	0.99(0.89,1.10)	0.60
	Q3	1.03(0.91,1.16)		Q3	1.07(0.95,1.21)		Q3	0.80(0.71,0.90)	
	Q4	1.02(0.90,1.15)		Q4	1.11(0.98,1.26)		Q4	0.78(0.69,0.89)	
	Q1	1		Q1	1		Q1	1	
Smoke(No)	Q2	1.09(0.90,1.32)		Q2	1.21(1.01,1.45)		Q2	1.02(0.84,1.23)	
	Q3	1.22(1.01,1.46)		Q3	1.17(0.98,1.41)		Q3	0.89(0.74,1.08)	
	Q4	1.07(0.89,1.29)		Q4	1.20(1.00,1.43)		Q4	0.90(0.75,1.08)	
	Q1	1	1.04	Q1	1	1.00	Q1	1	1.08
Smoke(Yes)	Q2	0.98(0.88,1.10)	0.27	Q2	1.27(1.15,1.42)	0.98	Q2	1.00(0.90,1.11)	0.04
	Q3	1.10(0.98,1.23)		Q3	1.15(1.03,1.28)		Q3	0.8(0.71,0.89)	
	Q4	1.02(0.91,1.14)		Q4	1.13(1.01,1.28)		Q4	0.81(0.72,0.9)	
	Q1	1		Q1	1		Q1	1	
	Q2	1.01(0.81,1.25)		Q2	1.08(0.87,1.34)		Q2	0.99(0.80,1.23)	
	Q3	1.03(0.83,1.26)		Q3	0.99(0.80,1.22)		Q3	0.92(0.75,1.14)	
	Q4	1.07(0.86,1.32)		Q4	1.15(0.94,1.41)		Q4	0.87(0.70,1.07)	