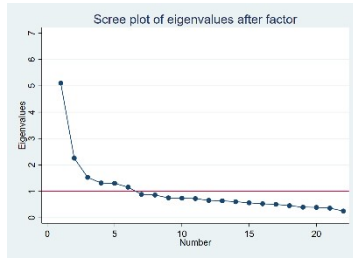
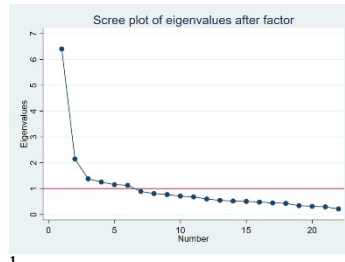


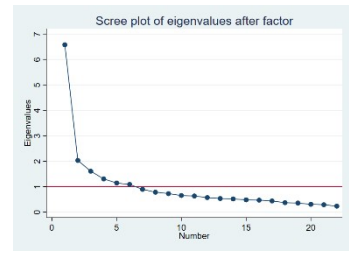
Figure S1. Flow chart of the study



a



b



c

Figure S2. Scree plot from principal components analysis, a: 1st trimester; b: 2nd trimester; c:

3rd trimester

Table S1. Characteristics of participants included and excluded in the present study.

Characteristics	Participants, n (%) or mean±SD		P-value
	Included n=1500	Excluded n=683	
Age at enrollment, years			0.78
≤ 35	1174 (79.1)	506 (78.6)	
> 35	303 (20.9)	138 (21.4)	
Ethnicity			0.95
Chinese Han	1239 (92.5)	539 (92.6)	
Others	100 (7.5)	43 (7.4)	
Educational attainment			<0.001
High school or below	182 (12.2)	120 (18.1)	
College or above	1308 (87.8)	543 (81.9)	
Household income per year, CNY			0.92
<50,000	517 (40.2)	232 (40.3)	
≥50,000	775 (60.0)	344 (59.7)	
Parity			0.07
Primipara	605 (65.5)	317 (70.4)	
Multipara	319 (34.5)	133 (29.6)	
Smoking status			<0.001
No	1450 (97.8)	629 (94.9)	
Yes	33 (2.2)	34 (5.1)	
Pre-pregnancy BMI category			0.33
<18.5, kg/m ²	191 (12.9)	85 (12.9)	
18.5-<24.0, kg/m ²	857 (57.8)	362 (54.8)	
≥24.0, kg/m ²	434 (29.3)	214 (32.4)	
Physical activity status during 1 st trimester, MET-hour/week	135.9±79.1	133.1±80.4	0.45
Physical activity status during 2 nd trimester, MET-hour/week	130.2±78.4	120.7±77.3	0.02
Physical activity status during 3 rd trimester, MET-hour/week	113.1±70.6	102.1±74.2	0.01
Daily calorie intake during 1 st trimester ^a			0.98
<1800 kcal/d	772 (51.5)	352 (51.5)	
≥1800 kcal/d	728 (48.5)	331 (48.5)	
Daily calorie intake during 2 nd trimester ^a			<0.001
<2100 kcal/d	876 (58.4)	487 (71.3)	
≥2100 kcal/d	624 (41.6)	196 (28.7)	
Daily calorie intake during 3 rd trimester ^a			0.34
<2250 kcal/d	930 (66.1)	261 (51.1)	
≥2250 kcal/d	477 (33.9)	67 (18.9)	
Child sex			0.31
Male	768 (51.7)	77 (56.2)	

Female

717 (48.3)

60 (43.8)

CNY: China yuan (1 China yuan = 0.15 US dollar); BMI: body mass index; MET: metabolic equivalent.

^a Pregnant women's daily calorie intake was categorized according to the recommend calorie intake for women in different trimesters by dietary guidelines for Chinese residents

Table S2. Participants' daily energy and nutrients intake according to dietary pattern scores, in tertiles, among the 1500 participants in China Medical University Birth Cohort Study

Dietary patterns	Total calorie intake (kcal/d), mean±SD	Carbohydrate intake (g/d), mean±SD	Protein intake (g/d), mean±SD	Fat intake (g/d), mean±SD
1st trimester				
□				
Fish-seafood pattern				
Tertile 1	1329.3 ± 516.4	229.8±99.1	45.9±15.6	36.6±18.4
Tertile 2	1813.2 ± 544.0	277.6±100.0	70.6±16.2	61.5±21.6
Tertile 3	2426.0 ± 936.5	336.1±131.5	108.8±51.1	90.1±43.4
<i>P</i>	<0.001	<0.001	<0.001	<0.001
Dairy-egg pattern				
Tertile 1	1305.0±541.8	225.3±105.3	47.4±18.1	36.2±18.3
Tertile 2	1780.7±502.9	274.1±97.1	70.5±18.4	58.9±19.9
Tertile 3	2482.4±890.6	344.0±123.0	107.3±51.2	93.1±41.8
<i>P</i>	<0.001	<0.001	<0.001	<0.001
Fruit-vegetable pattern				
Tertile 1	1308.9±600.9	192.7±86.5	56.3±34.7	45.6±27.2
Tertile 2	1897.1±675.1	287.8±90.9	77.7±38.1	63.6±32.9
Tertile 3	2362.3±818.3	362.9±111.8	91.2±43.0	78.9±41.7
<i>P</i>	<0.001	<0.001	<0.001	<0.001
2nd trimester				
Fish-seafood pattern				
Tertile 1	1429.6±502.4	225.7±92.3	53.3±16.1	45.9±19.9
Tertile 2	2023.5±585.3	297.0±106.9	81.6±18.3	71.5±23.9
Tertile 3	2753.0±1214.6	365.8±157.7	128.1±67.4	105.1±53.1
<i>P</i>	<0.001	<0.001	<0.001	<0.001
Meat-staple pattern				
Tertile 1	1333.8±456.0	206.1±85.5	52.0±15.5	43.4±17.4
Tertile 2	1939.1±410.8	285.5±85.8	78.9±12.9	67.7±17.6
Tertile 3	2933.2±1124.7	396.9±146.9	132.1±65.3	111.5±50.6
<i>P</i>	<0.001	<0.001	<0.001	<0.001
Dairy-egg pattern				
Tertile 1	1420.1±525.3	225.2±98.9	54.4±17.9	44.2±19.5
Tertile 2	1964.8±518.9	288.7±98.2	80.8±19.0	68.8±19.3
Tertile 3	2819.5±1184.3	374.5±155.4	127.7±67.5	109.5±51.1
<i>P</i>	<0.001	<0.001	<0.001	<0.001
3rd trimester				
Fish-seafood pattern				
Tertile 1	1461.8±512.3	230.8±93.3	54.4±16.2	46.8±19.5
Tertile 2	1960.6±566.4	285.9±106.7	80.4±16.9	69.6±21.7
Tertile 3	2789.4±1229.6	369.6±163.4	129.6±67.4	107.0±53.9
<i>P</i>	<0.001	<0.001	<0.001	<0.001
Meat-staple pattern				

Tertile 1	1324.9±421.8	201.1±77.3	52.7±14.9	43.8±16.9
Tertile 2	1925.0±398.0	283.3±86.9	78.8±13.1	67.3±16.1
Tertile 3	2960.2±1135.5	401.7±150.5	132.7±65.5	112.2±51.4
<i>P</i>	<0.001	<0.001	<0.001	<0.001
Dairy-egg pattern				
Tertile 1	1423.9±518.0	225.6±97.6	54.8±17.4	44.8±18.9
Tertile 2	1961.4±533.7	285.0±101.7	80.7±17.7	69.2±19.9
Tertile 3	2825.3±1201.0	375.6±158.9	128.7±67.7	109.3±52.2
<i>P</i>	<0.001	<0.001	<0.001	<0.001

Table S3. Trimester-specific associations of the two common dietary patterns with odds of preterm

birth, stratified by women's pre-pregnancy weight status

Dietary patterns	Tertile 1 Reference	Tertile 2 OR (95% CI)	Tertile 3 OR (95% CI)	<i>P</i> for interaction
Fish-seafood pattern in 1st trimester ^a		□	□	□
Subgroups analysis by pre-pregnancy				
BMI categorizes				0.254
<18.5, kg/m ²	1.00	7.56(1.93, 29.70)	4.88 (0.99, 24.18)	
18.5-<24.0, kg/m ²	1.00	2.16 (1.11, 4.20)	2.26 (1.02, 5.01)	
≥24.0, kg/m ²	1.00	1.33 (0.58, 3.04)	1.48 (0.58, 3.79)	
Fish-seafood pattern in 2nd trimester ^b				
Subgroups analysis by pre-pregnancy				
BMI categorizes				0.092
<18.5, kg/m ²	1.00	0.65 (0.13, 3.21)	0.84 (0.10, 7.08)	
18.5-<24.0, kg/m ²	1.00	0.50 (0.23, 1.06)	0.48 (0.19, 1.22)	
≥24.0, kg/m ²	1.00	0.57 (0.24, 1.37)	0.27 (0.09, 0.83)	
Fish-seafood pattern in 3rd trimester ^b				
Subgroups analysis				
Pre-pregnancy BMI categorizes				0.648
<18.5, kg/m ²	1.00	0.69 (0.09, 5.41)	0.87 (0.07, 11.46)	
18.5-<24.0, kg/m ²	1.00	0.88 (0.38, 2.04)	0.60 (0.20, 1.83)	
≥24.0, kg/m ²	1.00	1.13 (0.38, 3.33)	1.96 (0.52, 7.39)	
Dairy-egg pattern in 1st trimester ^a		□	□	□
Subgroups analysis by pre-pregnancy				
BMI categorizes				0.046
<18.5, kg/m ²	1.00	0.20 (0.05, 0.78)	0.10 (0.02, 0.54)	
18.5-<24.0, kg/m ²	1.00	0.64 (0.33, 1.25)	0.87 (0.41, 1.83)	
≥24.0, kg/m ²	1.00	1.04 (0.37, 2.13)	1.10 (0.43, 2.81)	
Dairy-egg pattern in 2nd trimester ^b				
Subgroups analysis by pre-pregnancy				
BMI categorizes				0.046
<18.5, kg/m ²	1.00	1.74 (0.45, 6.77)	0.82 (0.14, 4.82)	
18.5-<24.0, kg/m ²	1.00	1.50 (0.73, 3.06)	2.02 (0.85, 4.81)	
≥24.0, kg/m ²	1.00	1.34 (0.57, 3.12)	3.16(1.15, 8.66)	
Dairy-egg pattern in 3rd trimester ^b				
Subgroups analysis				
Pre-pregnancy BMI categorizes				0.543
<18.5, kg/m ²	1.00	5.30 (0.70, 40.39)	5.71 (0.51, 40.39)	
18.5-<24.0, kg/m ²	1.00	2.27 (0.92, 5.62)	2.50 (0.80, 7.81)	
≥24.0, kg/m ²	1.00	1.72 (0.61, 4.89)	2.57 (0.78, 8.48)	

^a Adjusted for age, ethnicity, education attainment, household income, parity, physical activity status, daily

calorie intake, child sex and other dietary pattern scores during the same trimester

^b Adjusted for age, ethnicity, education attainment, household income, parity, physical activity status, daily calorie intake, child sex, other dietary pattern scores during the same trimester and dietary pattern scores in the previous trimester

OR: odds ratio; CI: confidence interval; BMI: body mass index