



Supplementary Figure S1. Flowchart of the participants in the study. TMCHC, Tongji Maternal and Child Health Cohort; FFQ, food frequency questionnaire; OGTT, oral glucose tolerance test.

Supplementary Table S1. Baseline characteristics of lost sample and final sample

	Include	Exclude	P
n	3026	783	
Age (years)	28.1 ± 3.4	28.1 ± 1.3	0.694
Gestational week at survey (wk)	20.5 ± 5.0	20.7 ± 4.9	0.270
Ethnicity, n (%)			0.931
Han nationality	2958 (97.8)	765 (97.7)	
Pre-pregnancy BMI (kg/m ²)			0.582
< 18.5	617 (20.4)	147 (18.8)	
18.5-23.9	2059 (68.0)	541 (69.1)	
≥ 24.0	350 (11.6)	95 (12.1)	
Educational level (years)			0.627
≥ 16	1675 (55.4)	441 (56.3)	
Monthly income per capita, CNY			0.355
≥ 5000	1679 (55.5)	420 (53.6)	
Parity			0.157
≥ 1	385 (12.7)	85 (10.9)	
Smoking habit, n (%)			0.550
yes	99 (3.3)	29 (3.7)	
Drinking habit, n (%)			0.451
yes	43 (1.4)	14 (1.8)	
Pregnancy exercise, n (%)			0.786
yes	659 (21.8)	167 (21.3)	
GWG before GDM diagnosis			0.746
inadequate	404 (13.4)	106 (13.5)	
adequate	1247 (41.2)	311 (39.7)	
excessive	1375 (45.4)	366 (46.7)	

Note. MDD-W, Minimum Dietary Diversity for Women; BMI, body mass index; CNY, Chinese yuan; GWG, gestational weight gain; GDM, gestational diabetes mellitus.

Supplementary Table S2. Scoring criteria for MDD-W

Food Group	MDD-W score	
	1	0
Grains, white roots and tubers, and plantains	≥ 1 time/d	None
Pulses	≥ 1 time/d	None
Nuts and seeds	≥ 1 time/d	None
Dairy	≥ 1 time/d	None
Meat, poultry and fish	≥ 1 time/d	None
Eggs	≥ 1 time/d	None
Dark green leafy vegetables	≥ 1 time/d	None
Other vitamin A-rich fruits and vegetables	≥ 1 time/d	None
Other vegetables	≥ 1 time/d	None
Other fruits	≥ 1 time/d	None

Note. MDD-W, Minimum Dietary Diversity for Women.

Supplementary Table S3. Association between maternal MDD-W score and the risk of GDM

MDD-W score	N	GDM, <i>n</i> (%)
≤ 4	329	53 (16.1)
5	364	48 (13.2)
6	549	71 (12.9)
7	662	82 (12.4)
8	641	59 (9.2)
9	363	34 (9.4)
10	118	10 (8.5)

Note. MDD-W, Minimum Dietary Diversity for Women; GDM, gestational diabetes mellitus.

Supplementary Table S4. Scoring rates of each food group by pregnant women according to MDD-W subgroup

Food Group	MDD-W score		
	≤ 4	5-7	≥ 8
Grains, white roots and tubers, and plantains	99.4%	100.0%	100.0%
Pulses	13.1%	34.9%	67.7%
Nuts and seeds	7.6%	27.2%	68.8%
Dairy	21.6%	53.4%	86.8%
Meat, poultry and fish	39.8%	79.3%	95.7%
Eggs	14.6%	53.3%	86.8%
Dark green leafy vegetables	31.0%	66.4%	92.2%
Other vitamin A-rich fruits and vegetables	9.7%	35.1%	62.4%
Other vegetables	59.0%	83.3%	96.0%
Other fruits	60.2%	86.0%	97.0%

Note. MDD-W, Minimum Dietary Diversity for Women.

Supplementary Table S5 Associations of individual food group scores with the risk of GDM

	GDM, <i>n</i> (%)	Model1 ¹	Model2 ²	Model3 ³
		RR (95% CI)	RR (95% CI)	RR (95% CI)
Grains, white roots and tubers, and plantains				
Score = 0	0 (0.0)	-	-	-
Score = 1	357 (11.8)	-	-	-
Pulses				
Score = 0	207 (12.4)	1.12 (0.92, 1.36)	1.10 (0.90, 1.34)	0.96 (0.76, 1.18)
Score = 1	150 (11.1)	Ref. (1.00)	Ref. (1.00)	Ref. (1.00)
Nuts and seeds				
Score = 0	205 (11.4)	0.92 (0.75, 1.12)	0.93 (0.76, 1.13)	0.95 (0.80, 1.15)
Score = 1	152 (12.4)	Ref. (1.00)	Ref. (1.00)	Ref. (1.00)
Dairy				
Score = 0	161 (14.1)	1.36 (1.12, 1.65)	1.32 (1.09, 1.60)	1.08 (0.88, 1.32)
Score = 1	196 (10.4)	Ref. (1.00)	Ref. (1.00)	Ref. (1.00)
Meat, poultry and fish				
Score = 0	83 (14.5)	1.30 (1.03, 1.63)	1.28 (1.02, 1.60)	1.02 (0.79, 1.30)
Score = 1	274 (11.2)	Ref. (1.00)	Ref. (1.00)	Ref. (1.00)
Eggs				
Score = 0	142 (12.2)	1.06 (0.87, 1.29)	1.08 (0.89, 1.33)	0.90 (0.71, 1.09)
Score = 1	215 (11.6)	Ref. (1.00)	Ref. (1.00)	Ref. (1.00)
Dark green leafy vegetables				
Score = 0	129 (15.3)	1.46 (1.20, 1.79)	1.42 (1.16, 1.74)	1.30 (1.03, 1.61)
Score = 1	228 (10.5)	Ref. (1.00)	Ref. (1.00)	Ref. (1.00)
Other vitamin A-rich fruits and vegetables				
Score = 0	214 (12.3)	1.10 (0.91, 1.35)	1.05 (0.86, 1.28)	1.00 (0.80, 1.26)
Score = 1	143 (11.1)	Ref. (1.00)	Ref. (1.00)	Ref. (1.00)
Other vegetables				
Score = 0	71 (16.0)	1.44 (1.14, 1.84)	1.44 (1.14, 1.82)	1.16 (0.89, 1.49)
Score = 1	286 (11.1)	Ref. (1.00)	Ref. (1.00)	Ref. (1.00)
Other fruits				
Score = 0	59 (15.3)	1.35 (1.05, 1.75)	1.32 (1.02, 1.69)	1.05 (0.79, 1.38)
Score = 1	298 (11.3)	Ref. (1.00)	Ref. (1.00)	Ref. (1.00)

Note. RR, risk ratio; CI, confidence interval; MDD-W, Minimum Dietary Diversity for Women; GDM, gestational diabetes mellitus. ¹ Model 1: crude model. ² Model 2: adjusted for maternal age, ethnicity, educational level, monthly average income per capita, pre-BMI, parity, smoking habits, drinking habits, regular physical activity during pregnancy and family history of diabetes. ³ Model 3: further adjusted MDD-W score, gestational week at survey, weight gain before GDM diagnosis and total energy intake.

Supplementary Table S6. Stratified analysis of the association between MDD-W score and GDM

Group	GDM, n (%)	RR (95% CI) ¹
pre-BMI < 24.0 and non-EGWG (n=1472)		
MDD-W < 8	103 (10.5)	Ref. (1.00)
MDD-W ≥ 8	41 (8.3)	0.86 (0.60, 1.26)
pre-BMI < 24.0 and EGWG (n=1204)		
MDD-W < 8	93 (13.3)	Ref. (1.00)
MDD-W ≥ 8	44 (8.7)	0.65 (0.44, 0.97)
pre-BMI ≥ 24.0 and non-EGWG (n=179)		
MDD-W < 8	27 (22.1)	Ref. (1.00)
MDD-W ≥ 8	8 (14.0)	0.95 (0.44, 2.03)
pre-BMI ≥ 24.0 and EGWG (n=171)		
MDD-W < 8	31 (30.1)	Ref. (1.00)
MDD-W ≥ 8	10 (14.7)	0.39 (0.20, 0.82)

Note. RR, risk ratio; CI, confidence interval; GDM, gestational diabetes mellitus; BMI, body mass index; EGWG, excessive gestational weight gain.

¹Risk Ratios were adjusted for maternal age, ethnicity, educational level, monthly average income per capita, parity, smoking habits, drinking habits, regular physical activity during pregnancy, family history of diabetes, gestational week at survey and total energy intake.

Supplementary Table S7. Stratified analysis of the association of MDD-W score by FFQ and 24-h dietary recall with GDM

MDD-W score	GDM, n (%)	Model1 ¹	Model2 ²	Model3 ³
		RR (95% CI)	RR (95% CI)	RR (95% CI)
Participants surveyed by FFQ				
≤ 4	43 (15.6)	1.80 (1.27, 2.56)	1.75 (1.21, 2.52)	1.59 (1.06, 2.39)
5-7	148 (13.1)	1.51 (1.16, 1.97)	1.51 (1.15, 1.98)	1.46 (1.09, 1.96)
≥ 8	73 (8.6)	Ref. (1.00)	Ref. (1.00)	Ref. (1.00)
Participants surveyed by 24 h				
≤ 4	10 (18.9)	1.74 (0.91, 3.35)	1.63 (0.87, 3.05)	1.43 (0.75, 2.73)
5-7	53 (12.0)	1.11 (0.73, 1.69)	1.11 (0.72, 1.70)	1.06 (0.69, 1.64)
≥ 8	30 (10.8)	Ref. (1.00)	Ref. (1.00)	Ref. (1.00)

Note. FFQ, Food Frequency Questionnaire; RR, risk ratio; CI, confidence interval; MDD-W, Minimum Dietary Diversity for Women; GDM, gestational diabetes mellitus. ¹Model 1: crude model.

²Model 2: adjusted for maternal age, ethnicity, educational level, monthly average income per capita, pre-BMI, parity, smoking habits, drinking habits, regular physical activity during pregnancy and family history of diabetes. ³Model 3: further adjusted gestational week at survey, weight gain before GDM diagnosis and total energy intake.