

Supplementary Table S1. Scoring criteria for the Generalized Anxiety Disorder Scale (GAD-7) and the Patient Health Questionnaire-9 (PHQ-9)

Instrument	Items (n)	Response scale	Total score range	Symptom severity categories	Cutoff for symptoms
GAD-7	7	4-point Likert scale (0 = not at all, 3 = nearly every day)	0 - 21	0 - 4 = none; 5 - 9 = mild; 10 - 14 = moderate; 15 - 21 = severe	≥ 10
PHQ-9	9	4-point Likert scale (0 = not at all, 3 = nearly every day)	0 - 27	0 - 4 = none; 5 - 9 = mild; 10 - 14 = moderate; 15 - 27 = severe	≥ 10

Supplementary Table S2. Definitions and measurement criteria for unhealthy dietary behaviors among Chinese adults

Category	Operational definition	Reference period	Cutoff criteria
Preference for sugary beverages	Average intake exceeding four bottles ($\approx 1,200$ mL) per week	Past year	> 4 bottles / week
Being drunk	Habitual intake of alcoholic beverages (beer, rice wine, liquor, red wine, etc.)	Past year	≥ 1 time / week
Skipping breakfast	Eating breakfast no more than twice per week	Past week	≤ 2 times / week
Preference for takeaway	Consuming takeaway or dining out (excluding cafeteria) more than three times per week	Past week	> 3 times / week
On a diet	Engaging in intermittent or light fasting behavior	Past year	≥ 1 episode / year

Supplementary Table S3. The statistical description of categorical variables and the anxiety level of the study samples.

Categorical variables	Anxiety, n(%)					P value
	n	Anxiety level				
		Overall	Mild	Moderate	Severe	
Total	14358	1879(13.09)	4788(33.35)	1452(10.11)	427(2.97)	
Age/years						<0.001
18-34	7331	1173(16.00)	2526(34.46)	884(12.06)	289(3.94)	
35-44	2800	314(11.21)	996(35.57)	245(8.75)	69(2.46)	
45-60	4227	392(9.27)	2569(29.95)	323(7.64)	69(1.63)	
Sex						<0.001
Male	6871	947(13.78)	2144(31.20)	754(10.97)	193(2.81)	
Female	7487	932(12.45)	2644(35.31)	698(9.32)	234(3.13)	
Education						<0.001
Primary school and below	1032	110(10.66)	313(30.33)	88(8.53)	22(2.13)	
Middle school	2400	270(11.25)	694(28.92)	215(8.96)	55(2.29)	
High school	2568	355(13.82)	880(34.27)	277(10.79)	78(3.04)	
University and above	8358	1144(13.69)	2901(34.71)	872(10.43)	272(3.25)	
Region*						0.001
Eastern China	4454	649(14.57)	1513(33.97)	493(11.07)	156(3.50)	
Central China	4189	526(12.56)	1416(33.80)	418(9.98)	108(2.58)	
Western China	5707	700(12.27)	1857(32.54)	540(9.46)	160(2.80)	
Place of residence						0.024

Urban	10596	1356(12.80)	3494(32.97)	1037(9.79)	319(3.01)	<0.001
Rural	3762	523(13.90)	1294(34.40)	415(11.03)	108(2.87)	
Career status						
Student	4041	668(16.53)	1409(34.87)	503(12.45)	165(4.08)	
Employed	6915	784(11.34)	2274(32.89)	622(8.99)	162(2.34)	
Retired/Unoccupied	3402	427(12.55)	1105(32.48)	327(9.61)	100(2.94)	<0.001
Per capita monthly household income, yuan						
≤3000	4320	619(14.33)	1477(34.19)	463(10.72)	156(3.61)	
3001-6000	5947	684(11.50)	1917(32.23)	553(9.30)	131(2.20)	
≥6000	4091	576(14.08)	1394(34.07)	436(10.66)	140(3.42)	
Marital status						<0.001
Unmarried/Divorced/widowed	6026	1011(16.78)	2087(34.63)	747(12.40)	264(4.38)	
Married	8332	868(10.42)	2701(32.42)	705(8.46)	163(1.96)	
Whether living alone						<0.001
No	12330	1537(12.47)	4081(33.10)	1209(9.81)	328(2.66)	
Yes	2028	342(16.86)	707(34.86)	243(11.98)	99(4.88)	
Whether having health Insurance						<0.001
No	939	192(20.45)	312(33.23)	144(15.34)	48(5.11)	
Yes	13419	1687(12.57)	4476(33.36)	1308(9.75)	379(2.82)	

*Missed 8

Supplementary Table S4. The statistical description of categorical variables and the depressive symptom level of the study sample.

	Depressive, n(%)					P value
	n	Depressive symptom level				
		Overall	mild	moderate	severe	
Total	14358	3084(21.48)	5201(36.22)	1936(13.48)	1148(8.00)	<0.001
Age/years						
18-34	7331	1821(24.84)	2773(37.83)	1090(14.87)	731(9.97)	
35-44	2800	554(19.79)	1020(36.43)	369(13.18)	185(6.61)	
45-60	4227	709(16.77)	1408(33.31)	477(11.28)	185(5.49)	
Sex						<0.001
Male	6871	1523(22.17)	2312(33.65)	933(13.58)	590(8.59)	
Female	7487	1561(20.85)	2889(38.59)	1003(13.40)	558(7.45)	
Education						<0.001
Primary school and below	1032	177(17.15)	294(28.49)	112(10.85)	65(6.30)	
Middle school	2400	461(19.21)	790(32.92)	302(12.58)	159(6.63)	
High school	2568	566(22.04)	942(36.68)	363(14.14)	203(7.90)	
University and above	8358	1880(22.49)	3175(37.99)	1159(13.87)	721(8.63)	
Region*						<0.001
Eastern China	4454	1005(22.56)	1668(37.45)	608(13.65)	397(8.91)	
Central China	4189	886(21.15)	1570(37.48)	564(13.46)	322(7.69)	
Western China	5707	1187(20.80)	1962(34.38)	763(13.37)	424(7.43)	
Place of residence						0.241
Urban	10596	2233(21.07)	3851(36.34)	1397(13.18)	836(7.89)	
Rural	3762	851(22.62)	1350(35.89)	539(14.33)	312(8.29)	
Career status						<0.001
Student	4041	1022(25.29)	1614(39.94)	611(15.12)	411(10.17)	
Employed	6915	1333(19.28)	2445(35.36)	865(12.51)	468(6.77)	
Retired/Unoccupied	3402	729(21.43)	1142(33.57)	460(13.52)	269(7.91)	
Per capita monthly household income, yuan						<0.001
≤3000	4320	1042(24.12)	1534(35.51)	650(15.05)	392(9.07)	
3001-6000	5947	1141(19.19)	2121(35.67)	724(12.17)	417(7.01)	
≥6000	4091	901(22.02)	1546(37.79)	562(13.74)	339(8.29)	
Marital status						<0.001
Unmarried/Divorced/widowed	6026	1593(26.44)	2284(37.90)	954(15.83)	639(10.60)	

Married	8332	1491(17.89)	2917(35.01)	982(11.79)	509(6.11)	
Whether living alone						<0.001
No	12330	2520(20.44)	4485(36.37)	1604(13.01)	916(7.43)	
Yes	2028	564(27.81)	716(35.31)	332(16.37)	232(11.44)	
Whether having health Insurance						<0.001
No	939	295(31.42)	300(31.95)	161(17.15)	134(14.27)	
Yes	13419	2789(20.78)	4901(36.52)	1775(13.23)	1014(7.56)	

*Missed 8