Supplementary Table S1. Goodness-of-fit test for logistic regression models

Exposure	Variable type	Hosmer-Lemeshow χ^2	Df (degrees of freedom)	*P*-value	Model fit
TyG index	Quartiles	3.398	8	0.907	Good fit
TyG index	Continuous	5.116	8	0.745	Good fit
Crea	Quartiles	7.651	8	0.468	Good fit
Crea	Continuous	4.303	8	0.829	Good fit
TyG-Crea index	Quartiles	5.493	8	0.704	Good fit
TyG-Crea index	Continuous	6.652	8	0.575	Good fit

Note. Hosmer–Lemeshow goodness-of-fit test was used to assess model calibration. A non-significant *P*-value (> 0.05) indicated a good model fit. TyG, triglyceride–glucose; Crea, creatinine.

Supplementary Table S2. Threshold effect analysis of the TyG-Crea index and depressive symptoms (Model 3)

Model	Effect (95% *CI*)	*P*
Model 1 Fitting model by standard linear regression	1.510 (1.110, 2.060)	0.009
Model 2 Fitting model by two-piecewise linear regression		
Inflection point	1.580	
< 1.580	0.560 (0.260, 1.240)	0.156
≥ 1.580	2.260 (1.470, 3.480)	< 0.001
P for likelihood test		0.012

Note. *P* for likelihood ratio test assessed the improvement of the two-piecewise linear model over the standard linear model. The inflection point was determined using a recursive algorithm based on maximum model likelihood. This analysis was adjusted for age, sex, BMI, urban/rural residence, smoking status, alcohol consumption, marital status, employment status, hypertension, diabetes, education level, and income level. TyG, triglyceride–glucose; Crea, creatinine; *CI*, confidence interval; BMI, body mass index.

15 **Supplementary Table S3**. Baseline characteristics before and after PSM

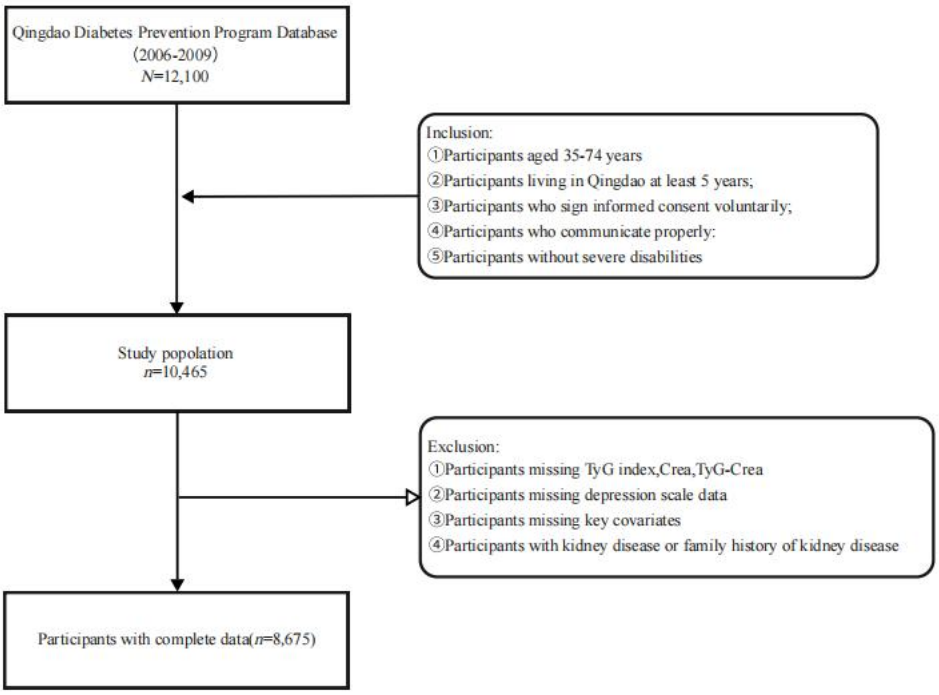
Variable	Before PSM					After PSM				
	Overall (n = 8,675)	Participants without depressive symptoms (n = 7,566)	Participants with depressive symptoms (n = 1,109)	P	SMD	Overall (n = 5,539)	Participants without depressive symptoms (n = 4,430)	Participants with depressive symptoms (n = 1,109)	P	SMD
Age (yrs)	51.12 ± 10.51	50.96 ± 10.49	52.21 ± 10.61	< 0.001	0.118	52.23 ± 10.72	52.23 ± 10.75	52.21 ± 10.61	0.953	-0.002
BMI (kg/m^2)	25.40 ± 3.60	25.42 ± 3.61	25.28 ± 3.58	0.212	-0.040	25.29 ± 3.59	25.29 ± 3.60	25.28 ± 3.58	0.916	-0.004
Gender, n (%)				0.143					0.832	
Male	3,389 (39.07)	2,978 (39.36)	411 (37.06)		-0.048	2,068 (37.34)	1,657 (37.40)	411 (37.06)		-0.007
Female	5,286 (60.93)	4,588 (60.64)	698 (62.94)		0.048	3,471 (62.66)	2,773 (62.60)	698 (62.94)		0.007
Residential status, n (%)				< 0.001					0.949	
Urban	3,444 (39.7)	2,843 (37.58)	601 (54.19)		0.334	2,997 (54.11)	2,396 (54.09)	601 (54.19)		0.002
Rural	5,231 (60.3)	4,723 (62.42)	508 (45.81)		-0.334	2,542 (45.89)	2,034 (45.91)	508 (45.81)		-0.002

16 ***Note.*** BMI, body mass index; PSM, propensity score matching. Matching covariates included age, sex, BMI，and
17 residential area. Standardized Mean Differences < 0.1 indicate good balance.

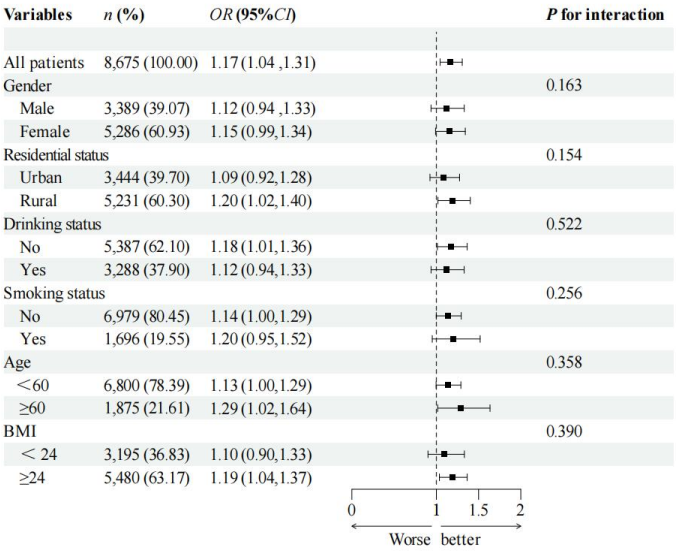
Supplementary Table S4. Logistic regression results after PSM (Model 3)

Variable	*OR* (95% *CI*)	*P*-value
TyG index	1.150 (1.020, 1.290)	0.018
Crea	1.620 (1.030, 2.570)	0.039
TyG-Crea index	1.450 (1.040, 2.010)	0.027

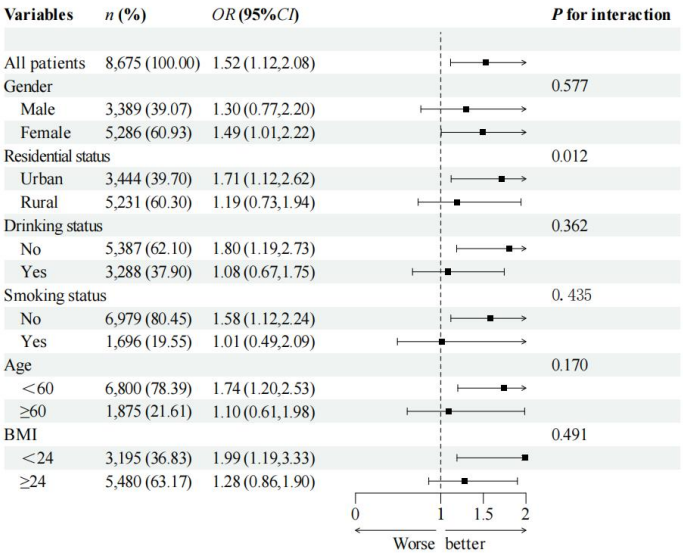
Note. Adjusting for BMI, smoking, alcohol consumption, marital status, employment, hypertension, diabetes, education, and income. PSM, propensity score matching; TyG, triglyceride-glucose; Crea, creatinine; *OR*, odds ratio; *CI*, confidence interval; BMI, body mass index.



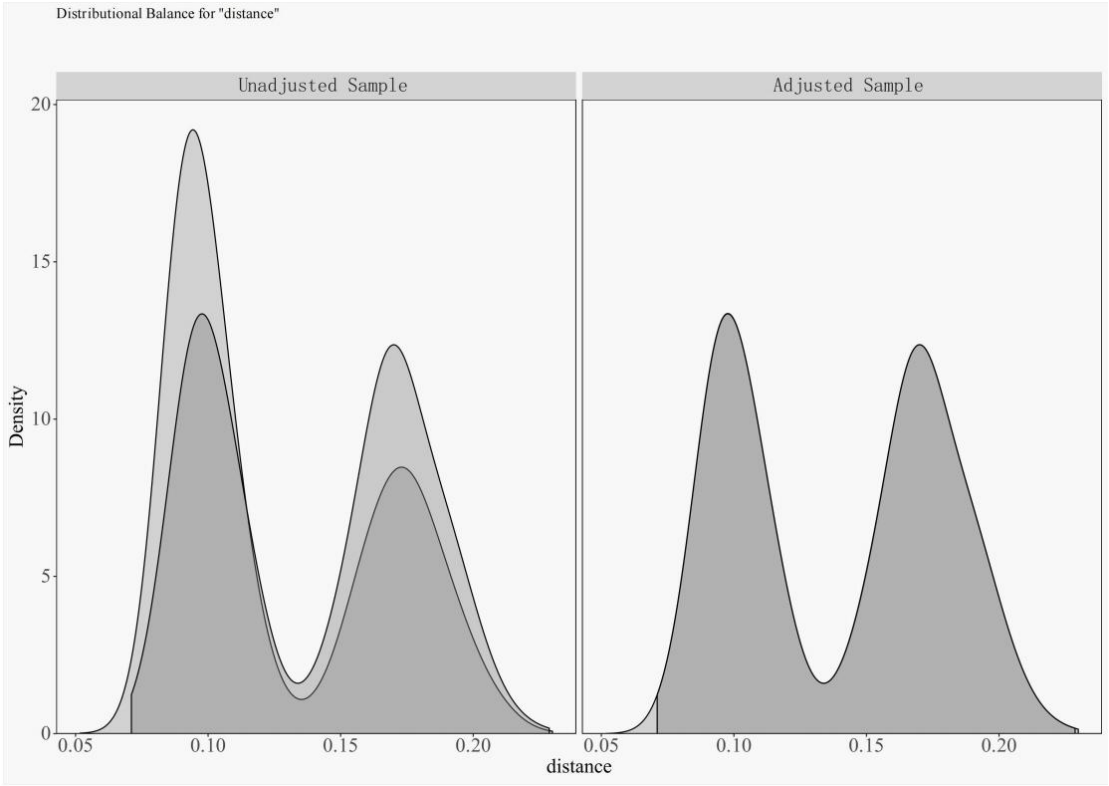
Supplementary Figure S1. Flow chart for the study population selection of this cross-sectional study. TyG, triglyceride-glucose; Crea, creatinine.



Supplementary Figure S2. Subgroup analysis on association between TyG index and depressive symptoms. TyG, triglyceride-glucose; *OR*: odds ratio; *CI*, confidence interval; BMI, body mass index.



Supplementary Figure S3. Subgroup analysis on association between TyG-Crea index and depressive symptoms. TyG, triglyceride-glucose; Crea, creatinine; *OR*: odds ratio; *CI*, confidence interval; BMI, body mass index.



Supplementary Figure S4. Love plot for covariate balance before and after PSM. PSM, propensity score matching.