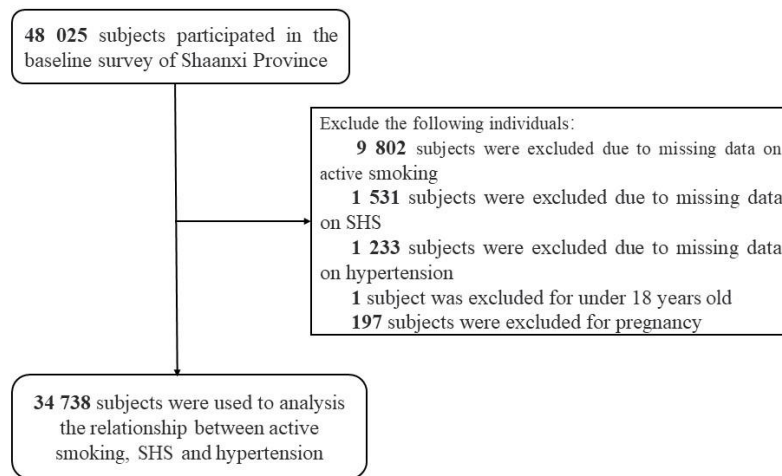


Supplementary Figure S1



Flowchart of analyzing the combined effect of active smoking and SHS on hypertension

Supplementary Table S1

Characteristics of subjects used to analysis the relationship between SHS, active smoking and hypertension risk in the RECS Data						
Characteristics ^a	All	SHS and Smoking Status				<i>P</i> value ^b
		No SHS, No Smoking,	SHS, No Smoking,	No SHS, Smoking,	SHS, Smoking,	
Sample size,n	34738	21578	9200	2588	1372	
Age (year)	50.29±13.07	51.89±12.76	47.56±12.61	50.66±14.29	42.59±12.82	<0.0001
Sex						<0.0001
Male	9662 (27.81)	4697 (48.61)	1427 (14.77)	2322 (24.03)	1216 (67.57)	
Female	25076(72.19)	16881 (67.32)	7773 (31.00)	266 (1.06)	156 (0.62)	
BMI (kg/m ²)	23.78±3.57	23.64±3.42	23.81±3.96	24.31±3.35	24.83±3.29	<0.0001
Lean (<18.5 kg/m ²)	1552 (4.49)	1037 (66.82)	410 (4.49)	84 (3.27)	21 (1.55)	
Normal (18.5~23.9kg/m ²)	17423 (50.45)	11142 (63.95)	4638 (26.62)	1126 (6.46)	517 (2.97)	<0.0001
Overweight (24.0~27.9kg/m ²)	11892 (34.44)	7174 (60.33)	3080 (25.90)	1023 (8.60)	615 (5.17)	
Obesity (≥28.0kg/m ²)	3667 (10.62)	2121 (57.84)	1008 (27.49)	334 (9.11)	204 (5.56)	
Nationality						0.0529
Han	34339 (99.14)	21358 (62.20)	9076 (26.43)	2557 (7.45)	21533 (70.75)	
Other	297 (0.86)	163 (54.88)	90 (30.30)	27 (9.09)	17 (5.72)	
Drinking						<0.0001
Drinker	25333 (73.08)	17441 (68.85)	6572 (25.94)	1034 (4.08)	286 (1.13)	
Non-drinker	9332 (26.92)	4099 (43.92)	2614 (28.01)	1540 (16.50)	1079 (11.56)	
Occupation						<0.0001
Employed	8833 (25.78)	6280 (71.10)	2169 (24.56)	304 (3.44)	80 (0.91)	
Unemployed	25427 (74.22)	15036 (59.13)	6886 (27.08)	2252 (8.86)	1253 (4.93)	
Household income(¥)						<0.0001

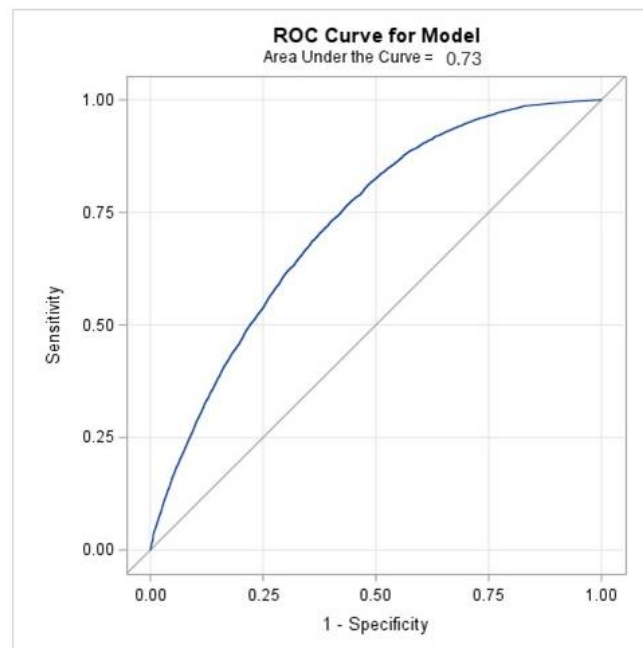
<10000	3789 (11.21)	2608 (68.83)	790 (20.85)	298 (7.86)	93 (2.45)	
10000-50000	16841 (49.85)	11402 (67.70)	4131 (24.53)	978 (5.81)	330 (1.96)	
50000-100000	6144 (18.19)	3359 (54.67)	1919 (31.23)	521 (8.48)	345 (5.62)	
>100000	7012 (20.75)	3706 (52.85)	2052 (29.26)	707 (10.08)	547 (7.80)	
Education						<0.0001
Primary school and lower	11533 (33.32)	8117 (70.38)	2779 (24.10)	531 (4.60)	106 (0.92)	
Middle and junior college	12775 (36.90)	8329 (65.20)	3209 (25.12)	926 (7.25)	311 (2.43)	
University and higher	10310 (29.78)	5085 (49.32)	3168 (30.73)	1113 (10.80)	944 (9.16)	
Marital Status						<0.0001
Single	2270 (6.57)	1121 (49.38)	761 (33.52)	201 (8.85)	187 (8.24)	
Married	30223 (87.49)	18704 (61.89)	8139 (26.93)	2249 (7.44)	1131 (3.74)	
Divorced and others	2052 (6.16)	1649 (80.36)	238 (11.60)	124 (6.04)	41 (2.00)	
Physical activity(METs)	21.31±32.11	20.87±31.61	21.53±29.57	21.23±38.60	27.03±41.33	<0.0001
SBP (mmHg)	123.46±18.61	123.74±18.85	122.21±18.74	125.69±17.30	123.28±15.55	<0.0001
DBP (mmHg)	79.60±11.08	79.56±11.05	78.99±11.12	81.32±11.03	81.03±10.92	<0.0001

SHS, secondhand smoking; **RECS**, Regional Ethnic Cohort Study; **BMI**, body mass index (calculated as weight in kilograms divided by height in meters squared); **SBP**, systolic blood pressure; **DBP**, diastolic blood pressure; **MET**, metabolic equivalent of task.

^a For some variables, the sum of categories was not equal to the total due to missing data. Continues variables were presented as Mean (SD) and categorical variables were presented as N (%).

^b Based on the variance analysis for continuous data and χ^2 tests for categorical data.

Supplementary Figure S2



The ROC curve of the multivariate logistic model for examining the relationship between SHS and hypertension

Models were adjusted for sex, age, nationality, BMI, degree of education, marital status, occupation, household income, drinking status, and physical activity.

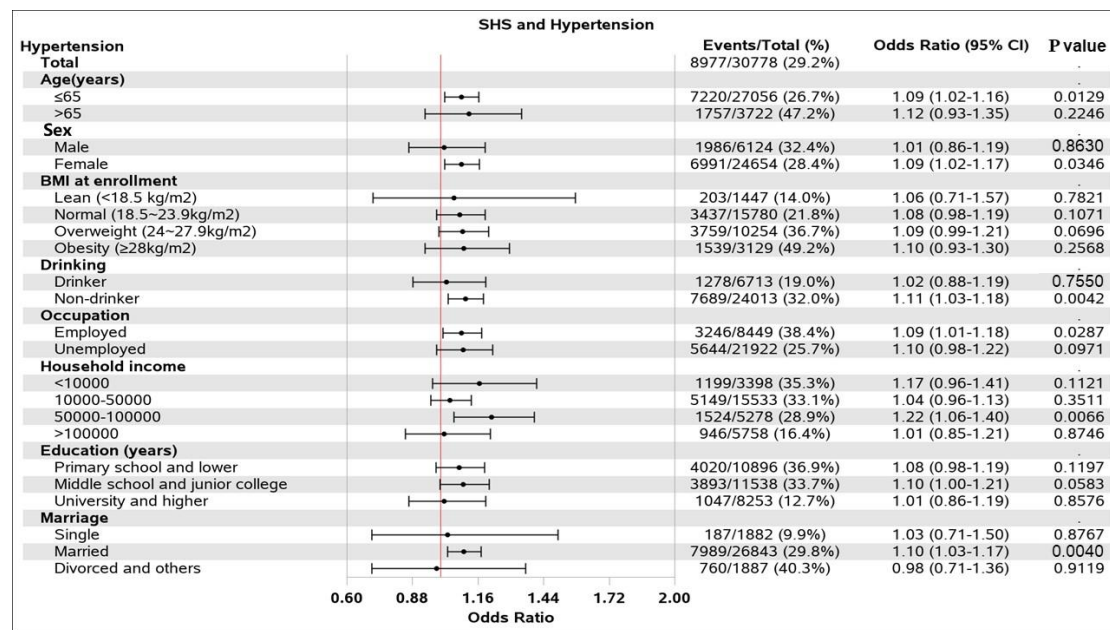
Supplementary Table S2

Interaction in the analysis of the relationship between SHS and hypertension

Variables	Wald Chi-Square	<i>P</i> Value
Age(years)	2.81	0.09
Sex	4.11	0.04
BMI at enrollment	0.67	0.88
Drinking	1.44	0.23
Occupation	0.68	0.41
Household income	3.70	0.30
Education(years)	1.85	0.40
Marriage	1.16	0.56

SHS, secondhand smoking; **BMI**, body mass index (calculated as weight in kilograms divided by height in meters squared).

Supplementary Figure S3



Subgroup analysis of the relationship between SHS and hypertension

SHS, secondhand smoking; CI, confidence interval; BMI, body mass index (calculated as weight in kilograms divided by height in meters squared).

Models were adjusted for sex, age, nationality, BMI, degree of education, marital status, occupation, household income, drinking status, and physical activity.

Supplementary Table S3

OR (95% CI) of SHS and hypertension after multiple imputation

SHS	Case/N ^a	Model 1 ^b		Model 2 ^c	
		OR (95%CI)	P value	OR (95%CI)	P value
NO SHS	6509/21578		1.00		1.00
SHS	2468/9200	1.12 (1.05,1.18)	<0.001	1.05 (1.02,1.08)	0.003
Time of SHS					
≤3 Hours/week	707/2782	1.03 (0.94,1.14)	0.513	0.95 (0.88,1.03)	0.226
≤12 Hours/week	1028/3436	1.18 (1.08,1.28)	<0.001	1.03(0.97,1.11)	0.330
>12 Hours/week	578/2015	1.18 (1.06,1.32)	0.002	1.09 (1.00,1.18)	0.053
Frequency of SHS					
1-2 times /week	307/1692	0.84 (0.74,0.96)	0.013	0.90 (0.81,1.10)	0.070
3-5 times /week	307/1452	0.97 (0.85,1.11)	0.667	1.01 (0.90,1.12)	0.891
Nearly everyday	1854/6057	1.21 (1.14,1.29)	<0.001	1.12 (1.05,1.20)	<0.001

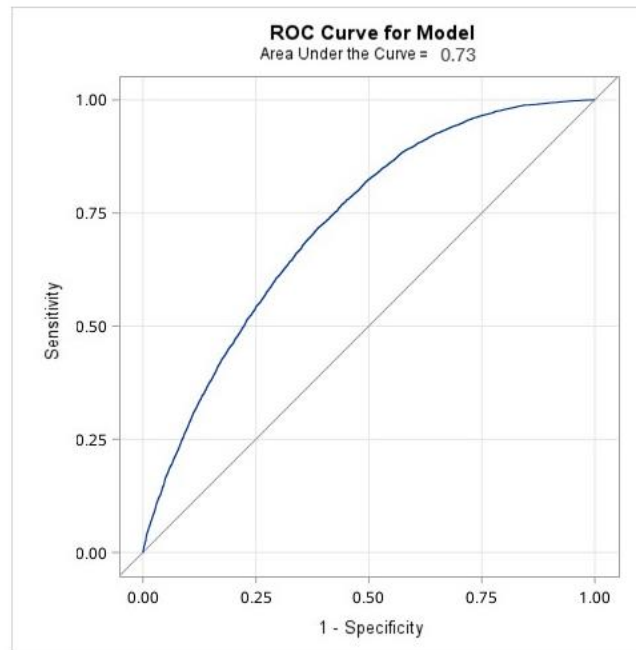
SHS, secondhand smoking; OR, odds ratio; CI, confidence interval.

^a N, Total number of cases of hypertension and non-hypertension in each category.

^b Model 1 was crude mode adjusted for age and sex.

^c Model 2 was adjusted further adjusted for nationality, BMI, degree of education, marital status, occupation, household income, drinking status, and physical activity.

Supplementary Figure S4



The ROC curve of the multivariate logistic model for examining the relationship between SHS, active smoking and hypertension. Models were adjusted for sex, age, nationality, BMI, degree of education, marital status, occupation, household income, drinking status, and physical activity.

Supplementary Table S4

Interaction in the analysis of the relationship between SHS, smoking and hypertension		
Variables	Wald Chi-Square	P Value
Age(years)	3.87	0.05
Sex	3.27	0.07
BMI at enrollment	0.90	0.82
Drinking	0.80	0.37
Occupation	0.57	0.45
Household income	2.33	0.51
Education(years)	0.65	0.72
Marriage	0.48	0.79

SHS, secondhand smoking; **BMI**, body mass index (calculated as weight in kilograms divided by height in meters squared).

Figure legends

Supplementary Figure S1. Flowchart of analyzing the combined effect of active smoking and SHS on hypertension

Supplementary Figure S2. The ROC curve of the multivariate logistic model for examining the relationship between SHS and hypertension

Models were adjusted for sex, age, nationality, BMI, degree of education, marital status, occupation, household income, drinking status, and physical activity.

Supplementary Figure S3. Subgroup analysis of the relationship between SHS and hypertension

SHS, secondhand smoking; **CI**, confidence interval.

Models were adjusted for sex, age, nationality, BMI, degree of education, marital status, occupation, household income, drinking status, and physical activity.

Supplementary Figure S4. The ROC curve of the multivariate logistic model for examining the relationship between SHS, active smoking and hypertension

Models were adjusted for sex, age, nationality, BMI, degree of education, marital status, occupation, household income, drinking status, and physical activity.