

Supplementary materials

Supplementary Table S1. Incidence of specific cardiovascular outcomes by sex and earthquake exposure

Outcome	No Exposure	Incidence (%)	Exposure	Incidence (%)
Female (<i>n</i> = 3,501)				
MI	22	1.23	52	3.05
Stroke	30	1.67	69	4.04
CAD	40	2.23	95	5.57
HF	25	1.39	48	2.81
AF	28	1.56	46	2.70
Composite CVD	117	6.52	247	14.48
Male (<i>n</i> = 3,911)				
MI	30	1.76	75	3.41
Stroke	35	2.05	88	4.00
CAD	50	2.93	128	5.81
HF	28	1.64	60	2.73
AF	32	1.87	65	2.95
Composite CVD	120	7.02	308	13.99

Note. Sex-stratified distribution of incident cardiovascular outcomes among participants with and without earthquake exposure. Individual outcomes included myocardial infarction (MI), stroke, coronary artery disease (CAD), heart failure (HF), and atrial fibrillation (AF). Composite CVD represents the occurrence of at least one of these events during follow-up.

Supplementary Table S2. Sex-Specific baseline characteristics of the study population (female)

Characteristics (Female)	Total (<i>n</i> = 3,501)	Earthquake		<i>P</i> -value
		No (<i>n</i> = 1,795)	Yes (<i>n</i> = 1,706)	
smoking, <i>n</i> (%)	65 (1.85)	31 (1.73)	34 (1.99)	0.866
drinking, <i>n</i> (%)	86 (2.46)	79 (4.40)	7 (0.41)	< 0.001
age, Mean $\pm$ SD	52.01 $\pm$ 8.99	52.22 $\pm$ 8.71	51.80 $\pm$ 9.28	0.164
sleep, Mean $\pm$ SD	6.68 $\pm$ 1.35	6.69 $\pm$ 1.37	6.67 $\pm$ 1.32	0.603
education, <i>n</i> (%)				< 0.001
Illiteracy/Primary	924 (26.39)	217 (12.09)	707 (41.44)	
Middle school	1,998 (57.07)	1,065 (59.33)	933 (54.69)	
College or above	579 (16.54)	513 (28.58)	66 (3.87)	
hypertension, <i>n</i> (%)	918 (26.22)	364 (20.28)	554 (32.47)	< 0.001
diabetes, <i>n</i> (%)	254 (7.26)	116 (6.46)	138 (8.09)	0.064
dyslipidemia, <i>n</i> (%)	1,349 (38.53)	584 (32.53)	765 (44.84)	< 0.001

Note. SD = standard deviation.

Supplementary Table S3. Sex-Specific baseline characteristics of the study population (Male)

Characteristics (Male)	Total (<i>n</i> = 3,911)	Earthquake		<i>P</i> -value
		No (<i>n</i> = 1,709)	Yes (<i>n</i> = 2,022)	
smoking, <i>n</i> (%)	2,184 (55.84)	976 (57.11)	1,208 (54.86)	0.160
drinking, <i>n</i> (%)	951 (24.32)	825 (48.27)	126 (5.72)	< 0.001
age, Mean ± SD	54.68 ± 10.72	53.47 ± 9.78	55.61 ± 11.31	< 0.001
sleep, Mean ± SD	6.67 ± 1.28	6.77 ± 1.33	6.57 ± 1.23	< 0.001
education, <i>n</i> (%)				< 0.001
Illiteracy/Primary	1,415 (36.18)	198 (11.59)	1,217 (60.19)	
Middle school	1,768 (45.21)	891 (52.14)	877 (43.37)	
College or above	728 (18.61)	620 (36.28)	108 (5.34)	
hypertension, <i>n</i> (%)	1,638 (41.88)	493 (28.85)	1,145 (52.00)	< 0.001
diabetes, <i>n</i> (%)	452 (11.56)	175 (10.24)	277 (12.58)	0.023
dyslipidemia, <i>n</i> (%)	1,916 (48.99)	807 (47.22)	1,109 (50.36)	0.051

Note. SD = standard deviation.

Supplementary Table S4. Baseline characteristics of participants according to earthquake exposure (after PSM)

Characteristics	Total (<i>n</i> = 3,468)	Earthquake Yes (<i>n</i> = 1,734)	Earthquake No (<i>n</i> = 1,734)	<i>P</i>
Age (years ± SD)	52.36 ± 9.74	51.98 ± 9.06	52.73 ± 10.37	0.048
Sleep (hours ± SD)	6.71 ± 1.32	6.71 ± 1.34	6.70 ± 1.30	0.758
Smoking, <i>n</i> (%)	840 (24.22)	417 (24.05)	423 (24.39)	0.812
Drinking, <i>n</i> (%)	290 (8.36)	158 (9.11)	132 (7.61)	0.111
Exercise, <i>n</i> (%)				< 0.001
Low intensity	1,035 (29.85)	513 (29.59)	522 (30.10)	
Modest intensity	2,298 (66.26)	1,178 (67.94)	1,120 (64.59)	
High intensity	135 (3.89)	43 (2.48)	92 (5.31)	
Income, <i>n</i> (%)				0.488
< ¥3000	1,232 (35.52)	617 (35.58)	615 (35.47)	
≥ ¥3000	2,236 (64.48)	1,117 (64.42)	1,119 (64.53)	
Hypertension, <i>n</i> (%)	1,045 (30.13)	504 (29.07)	541 (31.20)	0.171
Diabetes, <i>n</i> (%)	293 (8.45)	144 (8.30)	149 (8.59)	0.760
Dyslipidemia, <i>n</i> (%)	1,470 (42.39)	730 (42.10)	740 (42.68)	0.731

Note. SD = standard deviation.

Supplementary Table S5. Association between earthquake experience and carotid atherosclerosis formation (after PSM)

Sex	Earthquake	<i>OR (95% CI)</i>					
		Unadjusted	<i>P</i> -value	Model 1	<i>P</i> -value	Model 2	<i>P</i> -value
Female	No	Ref		Ref		Ref	
	Yes	2.91 (2.36–3.61)	< 0.001	2.23 (1.79–2.92)	0.004	2.40 (1.98–2.92)	< 0.001
Male	No	Ref		Ref		Ref	
	Yes	2.12 (1.68–2.67)	< 0.001	2.08 (1.59–2.73)	< 0.001	2.17 (1.64–2.88)	< 0.001
General population	No	Ref		Ref		Ref	
	Yes	2.61 (2.25–3.04)	< 0.001	2.11 (1.75–2.54)	< 0.001	2.26 (1.71–2.81)	< 0.001

Note. Model 1 was adjusted for age, education and income. Model 2 was adjusted for age, education, income, hypertension, diabetes, dyslipidemia, drinking, smoking, and exercise. *CI* = confidence interval; *OR* = odds ratio; Ref = reference.

Supplementary Table S6. Association between earthquake exposure and high plaque burden (≥ 2 plaques)

Sex	Earthquake Exposure	Adjusted <i>OR</i> (95% <i>CI</i>)	<i>P</i> -value
Female	No	Ref	
	Yes	1.63 (1.39–2.27)	< 0.001
Male	No	Ref	
	Yes	1.24 (1.09–1.53)	< 0.001
General population	No	Ref	
	Yes	1.32 (1.12–1.67)	< 0.001

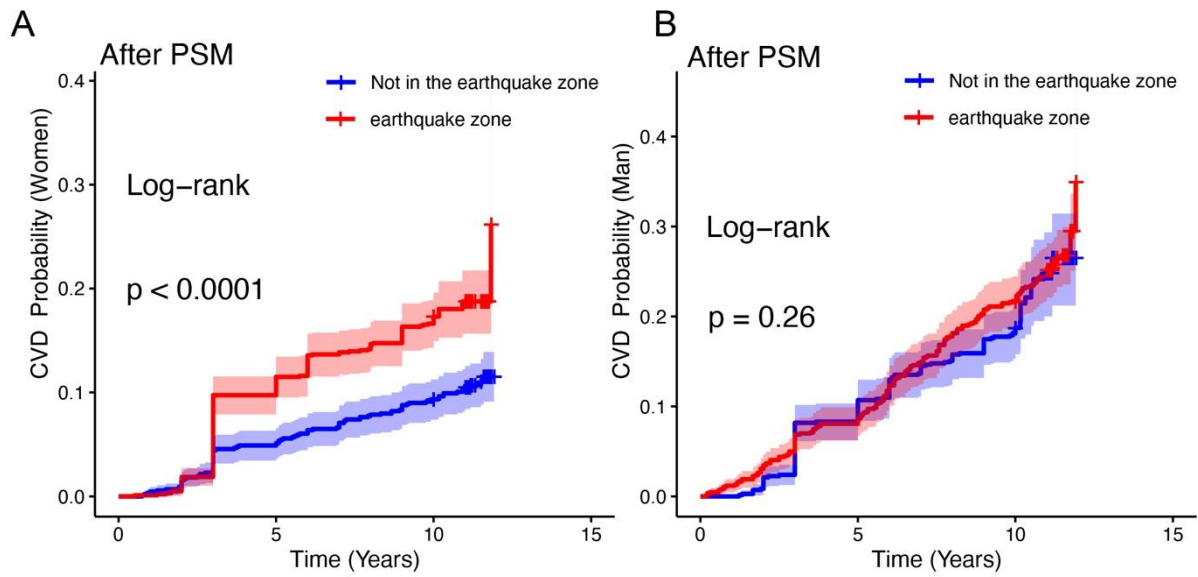
Note. Adjusted for age, education, income, hypertension, diabetes, dyslipidemia, drinking, smoking, and exercise. *CI* = confidence interval; *OR* = odds ratio; Ref = reference.

Supplementary Table S7. CVD risk following earthquake exposure (after PSM)

Sex	Earthquake	<i>OR</i> (95% <i>CI</i>)			
		Unadjusted	<i>P</i> -value	Adjusted	<i>P</i> -value
Female	No	Ref		Ref	
	Yes	1.91 (1.48–2.47)	< 0.001	1.66 (1.28–2.15)	< 0.001
Male	No	Ref		Ref	
	Yes	1.12 (0.91–2.39)	0.261	1.02 (0.82–1.13)	0.637

Note. Adjusted for age, education, income, hypertension, diabetes, dyslipidemia, drinking, smoking, and exercise. *CI* = confidence interval; *OR* = odds ratio; Ref = reference.

Figure S1



Supplementary Figure S1. Kaplan–Meier curve of cardiovascular disease risk by earthquake exposure (after PSM). The figure displays survival curves comparing the cumulative incidence of CVD events over time based on proximity to the earthquake epicenter.