

P	0	0	0	0	0	0	-	0	-	0	0	-	0	0	0	-	0	-	-	0	0	-	-	-	0	0	0	-	-	-	-	1									
P	0	-	0	-	-	-	0	0	0	0	-	0	-	-	-	0	0	0	0	-	-	-	0	0	-	0	-	-	-	-	0	0	0	0	0	-	1				
P	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	0	0	-	-	0	0	-	0	0	-	-	-	-	1			
P	-	-	-	-	0	-	-	-	-	0	0	-	0	0	0	-	-	-	-	-	-	0	-	0	0	-	-	0	0	0	-	0	-	-	-	0	-	0	1		
P	0	0	0	0	0	0	-	0	-	0	0	-	0	0	0	-	0	-	0	0	-	-	-	0	0	-	-	0	0	0	-	0	-	-	-	0	-	-	0	1	
P	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	-	0	0	0	0	-	0	0	0	-	0	0	0	-	0	-	0	0	0	0	0	-	-	0	0	1

P14	-0.57	3.22	-0.18	-	-6.91	5.77
P15	-9.39	6.01	-1.56	0.119	-21.22	2.44

Note: “-” denotes values not reported due to parameter instability, collinearity, or insufficient data coverage in specific demographic strata.

Table A2. Regression results examining the relationship between geomorphological and environmental factors with cancer mortality <65 years (CY).

	Coefficient	Standard Error	t	p-value	Lower 95%	Upper 95%
CY	63.98	0.97	66.25	0.000	62.08	65.88
P1	-6.35	3.03	-2.10	0.037	-12.31	-0.39
P2	-6.36	2.84	-2.24	0.026	-11.95	-0.78
P3	0.00	0.00	-	-	0.00	0.00
P4	3.16	3.89	0.81	-	-4.49	10.80
P5	-4.41	7.63	-0.58	0.564	-19.44	10.61
P6	-1.09	1.63	-0.67	0.506	-4.30	2.12
P7	0.00	0.00	-	-	0.00	0.00
P8	-2.36	1.68	-1.41	-	-5.67	0.94
P9	0.00	0.00	-	-	0.00	0.00
P10	0.00	0.00	-	-	0.00	0.00
P11	0.00	0.00	-	-	0.00	0.00
P12	0.00	0.00	-	-	0.00	0.00
P13	0.00	0.00	-	-	0.00	0.00
P14	-0.87	1.30	-0.67	-	-3.44	1.69

P15	-1.24	2.43	-0.51	0.612	-6.03	3.55
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Note: “-” denotes values not reported due to parameter instability, collinearity, or insufficient data coverage in specific demographic strata.

Table A3. Regression results examining the relationship between geomorphological and environmental factors with cancer mortality >65 years (CO).

	Coefficient	Standard Error	t	p-value	Lower 95%	Upper 95%
CO	932.40	9.86	94.58	0.000	913.01	951.80
P1	-83.48	30.91	-2.70	0.007	-144.30	-22.66
P2	-85.48	28.96	-2.95	0.003	-142.46	-28.51
P3	0.00	0.00	-	-	0.00	0.00
P4	75.06	39.67	1.89	-	-2.99	153.12
P5	-158.07	77.92	-2.03	0.043	-311.39	-4.75
P6	39.84	16.66	2.39	0.017	7.07	72.61
P7	0.00	0.00	-	-	0.00	0.00
P8	3.25	17.14	0.19	-	-30.48	36.97
P9	0.00	0.00	-	-	0.00	0.00
P10	0.00	0.00	-	-	0.00	0.00
P11	0.00	0.00	-	-	0.00	0.00
P12	0.00	0.00	-	-	0.00	0.00
P13	0.00	0.00	-	-	0.00	0.00
P14	0.73	13.31	0.05	-	-25.47	26.93

P15	-43.04	24.85	-1.73	0.084	-91.92	5.85
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Note: “-” denotes values not reported due to parameter instability, collinearity, or insufficient data coverage in specific demographic strata.

Table A4. Regression results examining the relationship between geomorphological and environmental factors with cancer mortality in men (CM).

	Coefficient	Standard Error	t	p-value	Lower 95%	Upper 95%
CM	305.15	3.21	94.99	0.000	298.83	311.47
P1	-28.12	10.07	-2.79	0.006	-47.94	-8.30
P2	-25.82	9.44	-2.74	0.007	-44.38	-7.25
P3	0.00	0.00	-	-	0.00	0.00
P4	14.93	12.93	1.15	-	-10.51	40.36
P5	-30.67	25.39	-1.21	0.228	-80.63	19.29
P6	-1.68	5.43	-0.31	0.757	-12.36	9.00
P7	0.00	0.00	-	-	0.00	0.00
P8	-8.89	5.59	-1.59	-	-19.87	2.10
P9	0.00	0.00	-	-	0.00	0.00
P10	0.00	0.00	-	-	0.00	0.00
P11	0.00	0.00	-	-	0.00	0.00
P12	0.00	0.00	-	-	0.00	0.00
P13	0.00	0.00	-	-	0.00	0.00
P14	-1.88	4.34	-0.43	-	-10.42	6.66

P15	-8.25	8.10	-1.02	0.309	-24.18	7.68
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Note: “-” denotes values not reported due to parameter instability, collinearity, or insufficient data coverage in specific demographic strata.

Table A5. Regression results examining the relationship between geomorphological and environmental factors with cancer mortality in men <65 (CMY).

	Coefficient	Standard Error	t	p-value	Lower 95%	Upper 95%
CMY	71.99	1.28	56.04	0.000	69.47	74.52
P1	-7.98	4.03	-1.98	0.048	-15.91	-0.06
P2	-7.10	3.77	-1.88	0.061	-14.53	0.32
P3	0.00	0.00	-	-	0.00	0.00
P4	1.27	5.17	0.25	-	-8.90	11.45
P5	1.04	10.15	0.10	0.918	-18.94	21.02
P6	-4.00	2.17	-1.84	0.066	-8.27	0.27
P7	0.00	0.00	-	-	0.00	0.00
P8	-4.72	2.23	-2.11	-	-9.12	-0.33
P9	0.00	0.00	-	-	0.00	0.00
P10	0.00	0.00	-	-	0.00	0.00
P11	0.00	0.00	-	-	0.00	0.00
P12	0.00	0.00	-	-	0.00	0.00
P13	0.00	0.00	-	-	0.00	0.00
P14	-0.99	1.74	-0.57	-	-4.40	2.43

P15	0.06	3.24	0.02	0.986	-6.32	6.43
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Note: “-” denotes values not reported due to parameter instability, collinearity, or insufficient data coverage in specific demographic strata.

Table A6. Regression results examining the relationship between geomorphological and environmental factors with cancer mortality in men >65 (CMO).

	Coefficient	Standard Error	t	p-value	Lower 95%	Upper 95%
CMO	1267.66	13.00	97.53	0.000	1242.09	1293.23
P1	-111.24	40.76	-2.73	0.007	-191.43	-31.05
P2	-103.07	38.18	-2.70	0.007	-178.19	-27.95
P3	0.00	0.00	-	-	0.00	0.00
P4	71.29	52.30	1.36	-	-31.62	174.20
P5	-161.60	102.74	-1.57	0.117	-363.75	40.55
P6	7.87	21.96	0.36	0.720	-35.33	51.08
P7	0.00	0.00	-	-	0.00	0.00
P8	-26.07	22.60	-1.15	-	-70.54	18.39
P9	0.00	0.00	-	-	0.00	0.00
P10	0.00	0.00	-	-	0.00	0.00
P11	0.00	0.00	-	-	0.00	0.00
P12	0.00	0.00	-	-	0.00	0.00
P13	0.00	0.00	-	-	0.00	0.00

P14	-5.56	17.56	-0.32	-	-40.10	28.98
P15	-42.55	32.76	-1.30	0.195	-107.01	21.90

Note: “-” denotes values not reported due to parameter instability, collinearity, or insufficient data coverage in specific demographic strata.

Table A7. Regression results examining the relationship between geomorphological and environmental factors with cancer mortality in women (CF).

	Coefficient	Standard Error	t	p-value	Lower 95%	Upper 95%
CF	183.32	2.34	78.51	0.000	178.73	187.92
P1	-17.58	7.32	-2.40	0.017	-31.98	-3.17
P2	-19.66	6.86	-2.87	0.004	-33.15	-6.16
P3	0.00	0.00	-	-	0.00	0.00
P4	21.06	9.40	2.24	-	2.57	39.55
P5	-41.74	18.46	-2.26	0.024	-78.06	-5.42
P6	12.05	3.95	3.06	0.002	4.29	19.82
P7	0.00	0.00	-	-	0.00	0.00
P8	4.25	4.06	1.05	-	-3.74	12.24
P9	0.00	0.00	-	-	0.00	0.00
P10	0.00	0.00	-	-	0.00	0.00
P11	0.00	0.00	-	-	0.00	0.00

P12	0.00	0.00	-	-	0.00	0.00
P13	0.00	0.00	-	-	0.00	0.00
P14	1.20	3.15	0.38	-	-5.00	7.41
P15	-11.36	5.89	-1.93	0.054	-22.94	0.22

Note: “-” denotes values not reported due to parameter instability, collinearity, or insufficient data coverage in specific demographic strata.

Table A8. Regression results examining the relationship between geomorphological and environmental factors with cancer mortality in women <65 (CFY).

	Coefficient	Standard Error	t	p-value	Lower 95%	Upper 95%
CFY	56.51	0.83	67.97	0.000	54.87	58.14
P1	-4.71	2.61	-1.81	0.072	-9.84	0.42
P2	-5.62	2.44	-2.30	0.022	-10.42	-0.81
P3	0.00	0.00	-	-	0.00	0.00
P4	5.37	3.35	1.60	-	-1.22	11.95
P5	-10.03	6.57	-1.53	0.128	-22.96	2.90
P6	1.62	1.40	1.15	0.251	-1.15	4.38
P7	0.00	0.00	-	-	0.00	0.00
P8	-0.11	1.45	-0.07	-	-2.95	2.74
P9	0.00	0.00	-	-	0.00	0.00
P10	0.00	0.00	-	-	0.00	0.00
P11	0.00	0.00	-	-	0.00	0.00

P12	0.00	0.00	-	-	0.00	0.00
P13	0.00	0.00	-	-	0.00	0.00
P14	-0.72	1.12	-0.64	-	-2.93	1.49
P15	-2.57	2.10	-1.23	0.221	-6.69	1.55

Note: “-” denotes values not reported due to parameter instability, collinearity, or insufficient data coverage in specific demographic strata.

Table A9. Regression results examining the relationship between geomorphological and environmental factors with cancer mortality in women >65 (CFO).

	Coefficient	Standard Error	t	p-value	Lower 95%	Upper 95%
CFO	706.86	9.82	71.96	0.000	687.53	726.19
P1	-70.71	30.80	-2.30	0.022	-131.32	-10.10
P2	-77.62	28.86	-2.69	0.008	-134.40	-20.84
P3	0.00	0.00	-	-	0.00	0.00
P4	85.84	39.53	2.17	-	8.06	163.62
P5	-172.64	77.65	-2.22	0.027	-325.42	-19.86
P6	55.15	16.60	3.32	0.001	22.49	87.80
P7	0.00	0.00	-	-	0.00	0.00
P8	22.23	17.08	1.30	-	-11.38	55.83
P9	0.00	0.00	-	-	0.00	0.00
P10	0.00	0.00	-	-	0.00	0.00
P11	0.00	0.00	-	-	0.00	0.00

P12	0.00	0.00	-	-	0.00	0.00
P13	0.00	0.00	-	-	0.00	0.00
P14	9.12	13.27	0.69	-	-16.99	35.22
P15	-47.66	24.76	-1.92	0.055	-96.37	1.06

Note: “-” denotes values not reported due to parameter instability, collinearity, or insufficient data coverage in specific demographic strata.

Table A10. Regression results examining the relationship between geomorphological and environmental factors with lung cancer mortality (LCT).

	Coefficient	Standard Error	t	p-value	Lower 95%	Upper 95%
LCT	47.44	0.81	58.80	0.000	45.85	49.02
P1	-0.39	4.01	-0.10	0.922	-8.27	7.49
P2	-5.59	7.31	-0.76	0.445	-19.98	8.80
P3	-16.86	15.42	-1.09	0.275	-47.20	13.49
P4	18.51	27.02	0.68	0.494	-34.66	71.68
P5	-1.17	0.88	-1.33	0.183	-2.90	0.56
P6	1.45	4.07	0.36	0.721	-6.56	9.46
P7	-4.66	7.43	-0.63	0.531	-19.27	9.95
P8	-17.59	14.90	-1.18	0.239	-46.92	11.73
P9	18.43	25.52	0.72	0.471	-31.79	68.65
P10	-0.87	1.21	-0.72	0.474	-3.25	1.52
P11	-0.22	1.04	-0.21	0.832	-2.26	1.82

P12	0.33	0.67	0.50	0.619	-0.99	1.66
P13	0.47	1.83	0.26	0.795	-3.12	4.07
P14	0.53	2.69	0.20	0.843	-4.76	5.83
P15	0.04	1.76	0.02	0.982	-3.42	3.50

Note: “-” denotes values not reported due to parameter instability, collinearity, or insufficient data coverage in specific demographic strata.

Table A11. Regression results examining the relationship between geomorphological and environmental factors with lung cancer mortality <65 (LCY).

	Coefficient	Standard Error	t	p-value	Lower 95%	Upper 95%
LCY	13.51	0.34	39.82	0.000	12.84	14.18
P1	1.19	1.68	0.71	0.479	-2.12	4.51
P2	0.18	3.08	0.06	0.954	-5.88	6.23
P3	-5.26	6.49	-0.81	0.418	-18.02	7.50
P4	-8.89	11.36	-0.78	0.435	-31.25	13.47
P5	-0.44	0.37	-1.18	0.238	-1.16	0.29
P6	1.55	1.71	0.91	0.366	-1.82	4.92
P7	0.87	3.12	0.28	0.780	-5.27	7.02
P8	-5.68	6.27	-0.91	0.365	-18.01	6.65
P9	-8.27	10.73	-0.77	0.442	-29.39	12.85

P10	0.38	0.51	0.75	0.451	-0.62	1.39
P11	-0.63	0.44	-1.44	0.152	-1.49	0.23
P12	-0.20	0.28	-0.69	0.491	-0.75	0.36
P13	0.59	0.77	0.76	0.446	-0.93	2.10
P14	0.66	1.13	0.58	0.559	-1.56	2.89
P15	-0.12	0.74	-0.17	0.868	-1.58	1.33

Note: “-” denotes values not reported due to parameter instability, collinearity, or insufficient data coverage in specific demographic strata.

Table A12. Regression results examining the relationship between geomorphological and environmental factors with lung cancer mortality >65 (LCO).

	Coefficient	Standard Error	t	p-value	Lower 95%	Upper 95%
LCO	187.49	3.30	56.77	0.000	180.99	193.99
P1	-6.93	16.40	-0.42	0.673	-39.20	25.34
P2	-29.41	29.94	-0.98	0.327	-88.32	29.50
P3	-64.72	63.14	-1.03	0.306	-188.96	59.52
P4	131.58	110.63	1.19	0.235	-86.11	349.27
P5	-4.20	3.59	-1.17	0.243	-11.27	2.87
P6	1.05	16.67	0.06	0.950	-31.74	33.84
P7	-27.51	30.41	-0.90	0.366	-87.34	32.33
P8	-66.76	61.01	-1.09	0.275	-186.82	53.30

P9	128.60	104.50	1.23	0.219	-77.02	334.22
P10	-6.04	4.96	-1.22	0.224	-15.80	3.72
P11	1.46	4.25	0.34	0.731	-6.91	9.84
P12	2.52	2.75	0.92	0.360	-2.90	7.94
P13	0.01	7.48	0.00	0.999	-14.72	14.74
P14	-0.00	11.02	-0.00	1.000	-21.68	21.68
P15	0.70	7.20	0.10	0.922	-13.47	14.88

Note: “-” denotes values not reported due to parameter instability, collinearity, or insufficient data coverage in specific demographic strata.

Table A13. Regression results examining the relationship between geomorphological and environmental factors with lung cancer mortality in men (LCM).

	Coefficient	Standard Error	t	p-value	Lower 95%	Upper 95%
LCM	69.77	1.24	56.33	0.000	67.34	72.21
P1	3.16	6.15	0.51	0.608	-8.94	15.26
P2	3.26	11.23	0.29	0.772	-18.83	25.35
P3	-10.54	23.68	-0.44	0.657	-57.12	36.05
P4	23.91	41.49	0.58	0.565	-57.72	105.54
P5	-2.19	1.35	-1.62	0.105	-4.84	0.46
P6	2.89	6.25	0.46	0.644	-9.41	15.19
P7	5.41	11.40	0.47	0.635	-17.03	27.85
P8	-12.63	22.88	-0.55	0.581	-57.65	32.39

P9	22.46	39.19	0.57	0.567	-54.65	99.56
P10	2.34	1.86	1.26	0.209	-1.32	6.00
P11	-2.04	1.60	-1.28	0.202	-5.18	1.10
P12	-0.24	1.03	-0.23	0.815	-2.27	1.79
P13	1.76	2.81	0.63	0.532	-3.76	7.28
P14	-2.58	4.13	-0.62	0.533	-10.71	5.55
P15	0.87	2.70	0.32	0.747	-4.44	6.19

Note: “-” denotes values not reported due to parameter instability, collinearity, or insufficient data coverage in specific demographic strata.

Table A14. Regression results examining the relationship between geomorphological and environmental factors with lung cancer mortality in men <65 (LCMY).

	Coefficient	Standard Error	t	p-value	Lower 95%	Upper 95%
LCMY	18.00	0.53	34.03	0.000	16.96	19.04
P1	1.90	2.63	0.72	0.469	-3.26	7.07
P2	3.31	4.80	0.69	0.490	-6.12	12.75
P3	-2.65	10.11	-0.26	0.793	-22.55	17.25
P4	-18.12	17.72	-1.02	0.307	-52.98	16.75
P5	-0.25	0.58	-0.44	0.662	-1.39	0.88
P6	1.39	2.67	0.52	0.603	-3.86	6.64
P7	4.21	4.87	0.87	0.388	-5.37	13.80

P8	-3.59	9.77	-0.37	0.714	-22.82	15.64
P9	-17.26	16.74	-1.03	0.303	-50.19	15.68
P10	0.96	0.79	1.21	0.226	-0.60	2.53
P11	-0.86	0.68	-1.26	0.210	-2.20	0.48
P12	-0.25	0.44	-0.57	0.567	-1.12	0.61
P13	1.23	1.20	1.02	0.307	-1.13	3.59
P14	0.42	1.76	0.24	0.814	-3.06	3.89
P15	0.01	1.15	0.01	0.990	-2.26	2.28

Note: “-” denotes values not reported due to parameter instability, collinearity, or insufficient data coverage in specific demographic strata.

Table A15. Regression results examining the relationship between geomorphological and environmental factors with lung cancer mortality in men >65 (LCMO).

	Coefficient	Standard Error	t	p-value	Lower 95%	Upper 95%
LCMO	283.50	4.78	59.28	0.000	274.09	292.91
P1	8.33	23.75	0.35	0.726	-38.39	55.06
P2	3.04	43.35	0.07	0.944	-82.25	88.33
P3	-43.07	91.42	-0.47	0.638	-222.95	136.81
P4	197.34	160.18	1.23	0.219	-117.84	512.52
P5	-10.19	5.20	-1.96	0.051	-20.43	0.05
P6	9.07	24.13	0.38	0.707	-38.41	56.55
P7	10.35	44.03	0.24	0.814	-76.28	96.99

P8	-49.96	88.34	-0.57	0.572	-223.78	123.87
P9	186.37	151.29	1.23	0.219	-111.34	484.07
P10	8.03	7.18	1.12	0.265	-6.10	22.16
P11	-6.92	6.16	-1.12	0.262	-19.05	5.20
P12	-0.19	3.99	-0.05	0.961	-8.04	7.65
P13	3.95	10.84	0.36	0.716	-17.37	25.27
P14	-14.94	15.95	-0.94	0.350	-46.32	16.45
P15	4.41	10.43	0.42	0.672	-16.11	24.93

Note: “-” denotes values not reported due to parameter instability, collinearity, or insufficient data coverage in specific demographic strata.

Table A16. Regression results examining the relationship between geomorphological and environmental factors with lung cancer mortality in women (LCF).

	Coefficients	Standard Error	t	p-value	Lower 95%	Upper 95%
LCF	30.35	0.91	33.50	0.000	28.56	32.13
P1	-2.85	4.50	-0.63	0.527	-11.70	6.00
P2	-15.50	8.21	-1.89	0.060	-31.66	0.66
P3	-26.32	17.32	-1.52	0.130	-60.40	7.76
P4	22.61	30.35	0.75	0.457	-37.10	82.33
P5	-0.29	0.99	-0.29	0.768	-2.23	1.65
P6	0.73	4.57	0.16	0.874	-8.27	9.72

P7	-15.68	8.34	-1.88	0.061	-32.09	0.73
P8	-25.77	16.74	-1.54	0.125	-58.70	7.16
P9	23.29	28.66	0.81	0.417	-33.11	79.69
P10	-3.18	1.36	-2.34	0.020	-5.86	-0.50
P11	0.77	1.17	0.66	0.510	-1.53	3.07
P12	0.60	0.76	0.79	0.430	-0.89	2.08
P13	-0.49	2.05	-0.24	0.810	-4.53	3.55
P14	2.49	3.02	0.82	0.411	-3.46	8.43
P15	-1.58	1.98	-0.80	0.424	-5.47	2.31

Note: “-” denotes values not reported due to parameter instability, collinearity, or insufficient data coverage in specific demographic strata.

Table A17. Regression results examining the relationship between geomorphological and environmental factors with lung cancer mortality in women <65 (LCFY).

	Coefficient	Standard Error	t	p-value	Lower 95%	Upper 95%
LCFY	9.24	0.28	32.69	0.000	8.68	9.79
P1	0.51	1.40	0.37	0.715	-2.25	3.27
P2	-2.74	2.56	-1.07	0.285	-7.78	2.30
P3	-8.89	5.40	-1.65	0.101	-19.52	1.73
P4	0.54	9.46	0.06	0.955	-18.08	19.16
P5	-0.60	0.31	-1.94	0.053	-1.20	0.01
P6	1.71	1.43	1.20	0.232	-1.10	4.51

P7	-2.26	2.60	-0.87	0.386	-7.38	2.86
P8	-8.81	5.22	-1.69	0.093	-19.08	1.46
P9	0.91	8.94	0.10	0.919	-16.68	18.50
P10	-0.18	0.42	-0.41	0.679	-1.01	0.66
P11	-0.43	0.36	-1.19	0.236	-1.15	0.28
P12	-0.18	0.24	-0.76	0.447	-0.64	0.28
P13	-0.00	0.64	-0.01	0.994	-1.26	1.25
P14	0.85	0.94	0.90	0.369	-1.01	2.70
P15	-0.33	0.62	-0.53	0.596	-1.54	0.89

Note: “-” denotes values not reported due to parameter instability, collinearity, or insufficient data coverage in specific demographic strata.

Table A18. Regression results examining the relationship between geomorphological and environmental factors with lung cancer mortality in women >65 (LCFO).

	Coefficients	Standard Error	t	p-value	Lower 95%	Upper 95%
LCFO	117.49	3.86	30.48	0.000	109.91	125.08
P1	-16.73	19.14	-0.87	0.383	-54.40	20.94
P2	-68.14	34.94	-1.95	0.052	-136.90	0.62
P3	-98.27	73.70	-1.33	0.183	-243.28	46.75
P4	113.83	129.13	0.88	0.379	-140.26	367.92
P5	0.98	4.20	0.23	0.816	-7.28	9.23

P6	-3.33	19.45	-0.17	0.864	-41.61	34.94
P7	-71.08	35.49	-2.00	0.046	-140.92	-1.23
P8	-95.80	71.22	-1.35	0.180	-235.94	44.33
P9	115.74	121.97	0.95	0.343	-124.26	355.74
P10	-15.59	5.79	-2.69	0.007	-26.98	-4.19
P11	5.74	4.97	1.15	0.249	-4.04	15.51
P12	3.80	3.21	1.18	0.238	-2.52	10.12
P13	-2.51	8.74	-0.29	0.774	-19.70	14.68
P14	9.25	12.86	0.72	0.472	-16.05	34.56
P15	-6.76	8.41	-0.80	0.422	-23.30	9.78

Note: “-” denotes values not reported due to parameter instability, collinearity, or insufficient data coverage in specific demographic strata.