Table S3. Factors associated with SF-36v2† subscale scores

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | SF-36v2 subscale | | | | | | | |
| Predictive variables | Physical functioning | Role: physical | Bodily pain | General health perception | Vitality | Social functioning | Role: emotional | Mental health |
| Crude model | OR (95% CI) | OR (95% CI) | OR (95% CI) | OR (95% CI) | OR (95% CI) | OR (95% CI) | OR (95% CI) | OR (95% CI) |
| Climate conditions |  |  |  |  |  |  |  |  |
| Ambient temperature (10℃) | 1.21 (1.05 — 1.37) | 1.22 (1.05 — 1.41) | 1.09 (0.93 — 1.28) | 1.26 (1.08 — 1.44) | 1.06 (0.93 — 1.21) | 1.03 (0.88 — 1.20) | 1.15 (1.00 — 1.33) | 1.13 (0.97 — 1.31) |
| Relative humidity (10%) | 1.16 (0.97 — 1.40) | 1.20 (0.99 — 1.47) | 1.13 (0.92 — 1.37) | 1.21 (1.01 — 1.45) | 1.05 (0.87 — 1.27) | 1.04 (0.85 — 1.28) | 1.20 (0.97 — 1.48) | 1.18 (0.96 — 1.45) |
| Concentrations |  |  |  |  |  |  |  |  |
| PM2.5 (10 μg/m3) | 0.90 (0.64 — 1.26) | 1.02 (0.72 — 1.45) | 0.96 (0.68 — 1.37) | 0.86 (0.62 — 1.21) | 1.06 (0.78 — 1.47) | 1.49 (1.04 — 2.16) | 0.98 (0.69 — 1.40) | 1.02 (0.71 — 1.48) |
| PM10 (10 μg/m3) | 1.00 (0.89 — 1.13) | 1.01 (0.90 — 1.14) | 0.99 (0.87 — 1.14) | 0.99 (0.89 — 1.10) | 1.06 (0.95 — 1.20) | 1.13 (0.99 — 1.28) | 0.96 (0.83 — 1.10) | 1.01 (0.89 — 1.16) |
| NO2 (10 ppb) | 0.90 (0.74 — 1.09) | 0.90 (0.73 — 1.09) | 0.96 (0.78 — 1.17) | 0.89 (0.73 — 1.08) | 1.00 (0.83 — 1.20) | 1.13 (0.91 — 1.41) | 0.92 (0.75 — 1.14) | 1.02 (0.83 — 1.26) |
| O3 (10 μg/m3) | 1.17 (1.05 — 1.32) | 1.12 (1.00 — 1.26) | 1.09 (0.96 — 1.24) | 1.15 (1.03 — 1.28) | 1.05 (0.94 — 1.17) | 1.07 (0.95 — 1.21) | 1.06 (0.94 — 1.20) | 1.09 (0.97 — 1.22) |
| Asian sand dust events7 | 0.88 (0.62 — 1.26) | 0.77 (0.54 — 1.08) | 0.86 (0.59 — 1.25) | 0.76 (0.55 — 1.06) | 1.08 (0.77 — 1.52) | 1.21 (0.81 — 1.80) | 0.95 (0.65 — 1.38) | 1.01 (0.71 — 1.43) |
|  |  |  |  |  |  |  |  |  |
| Adjusted model | OR (95% CI) | OR (95% CI) | OR (95% CI) | OR (95% CI) | OR (95% CI) | OR (95% CI) | OR (95% CI) | OR (95% CI) |
| Age (1 year) | 1.08 (1.03 — 1.13) | 1.01 (0.97 — 1.05) | 0.99 (0.96 — 1.03) | 0.98 (0.94 — 1.03) | 1.00 (0.96 — 1.04) | 1.00 (0.96 — 1.05) | 1.00 (0.96 — 1.04) | 1.01 (0.97 — 1.05) |
| Gender (male) | 0.40 (0.13 — 1.23) | 1.05 (0.48 — 2.30) | 0.40 (0.19 — 0.84) | 0.79 (0.31 — 1.98) | 0.27 (0.10 — 0.69) | 0.95 (0.44 — 2.06) | 0.91 (0.43 — 1.93) | 0.50 (0.22 — 1.16) |
| Body mass index (≤ median) | 0.60 (0.35 — 1.03) | 1.41 (0.84 — 2.35) | 0.96 (0.60 — 1.54) | 1.50 (0.88 — 2.55) | 1.41 (0.81 — 2.44) | 1.14 (0.66 — 1.97) | 1.01 (0.60 — 1.71) | 1.12 (0.68 — 1.87) |
| Smoking (vs. Never-smoker) |  |  |  |  |  |  |  |  |
| Ex-smoker | 0.71 (0.26 — 1.89) | 1.03 (0.45 — 2.34) | 1.54 (0.73 — 3.25) | 0.92 (0.38 — 2.25) | 1.38 (0.63 — 3.01) | 1.14 (0.53 — 2.46) | 1.29 (0.58 — 2.89) | 0.95 (0.41 — 2.20) |
| Current smoker | 2.13 (0.74 — 6.14) | 2.12 (0.89 — 5.04) | 1.52 (0.71 — 3.27) | 1.47 (0.55 — 3.89) | 3.13 (1.24 — 7.85) | 1.49 (0.65 — 3.41) | 1.73 (0.72 — 4.13) | 1.46 (0.57 — 3.72) |
| COPD†† status (vs. No COPD) |  |  |  |  |  |  |  |  |
| GOLD‡ stage I | 4.67 (1.05 — 20.77) | 1.93 (0.71 — 5.24) | 3.00 (1.09 — 8.22) | 5.81 (1.80 — 18.79) | 3.51 (0.97 — 12.69) | 1.24 (0.39 — 3.95) | 1.03 (0.36 — 2.90) | 2.64 (0.85 — 8.18) |
| GOLD stage II | 6.05 (2.06 — 17.76) | 3.07 (1.32 — 7.13) | 2.43 (1.13 — 5.22) | 5.60 (2.27 — 13.79) | 4.57 (1.65 — 12.64) | 2.82 (1.13 — 7.08) | 1.85 (0.79 — 4.32) | 4.34 (1.80 — 10.46) |
| GOLD stage III, IV | 26.25 (6.96 — 98.94) | 8.35 (2.92 — 23.86) | 4.64 (1.70 — 12.68) | 38.60 (9.36 — 159.13) | 11.85 (3.52 — 39.91) | 4.11 (1.40 — 12.00) | 2.88 (1.02 — 8.17) | 6.76 (2.44 — 18.74) |
| Using air cleaner | 1.38 (0.72 — 2.66) | 1.32 (0.67 — 2.58) | 1.45 (0.88 — 2.40) | 0.92 (0.46 — 1.85) | 1.22 (0.61 — 2.42) | 1.62 (0.92 — 2.85) | 1.17 (0.60 — 2.26) | 1.66 (0.92 — 2.99) |
| Time spent outdoors (hours/day) | 0.93 (0.82 — 1.06) | 0.93 (0.84 — 1.03) | 0.97 (0.88 — 1.06) | 0.94 (0.85 — 1.04) | 0.97 (0.87 — 1.07) | 0.96 (0.86 — 1.07) | 0.97 (0.88 — 1.07) | 0.95 (0.86 — 1.05) |
| Climate conditions |  |  |  |  |  |  |  |  |
| Ambient temperature (℃) ‡‡ | 1.42 (1.06 — 1.91) | 1.39 (1.07 — 1.80) | 0.97 (0.73 — 1.30) | 1.47 (1.11 — 1.95) | 1.09 (0.85 — 1.41) | 1.00 (0.75 — 1.34) | 1.16 (0.90 — 1.49) | 1.02 (0.78 — 1.33) |
| Relative humidity (%) ‡‡ | 0.80 (0.56 — 1.16) | 0.90 (0.62 — 1.30) | 1.18 (0.82 — 1.70) | 0.89 (0.63 — 1.27) | 1.02 (0.70 — 1.48) | 1.03 (0.71 — 1.49) | 1.03 (0.72 — 1.48) | 1.20 (0.82 — 1.74) |
| Concentrations§ |  |  |  |  |  |  |  |  |
| PM2.5 (10 μg/m3) | 1.31 (0.68 — 2.53) | 1.21 (0.69 — 2.14) | 1.15 (0.67 — 1.97) | 1.06 (0.56 — 2.00) | 1.30 (0.72 — 2.36) | 1.86 (1.02 — 3.39) | 1.05 (0.61 — 1.81) | 1.14 (0.65 — 1.97) |
| PM10 (10 μg/m3) | 1.09 (0.86 — 1.38) | 1.10 (0.89 — 1.36) | 1.06 (0.84 — 1.33) | 1.03 (0.81 — 1.30) | 1.10 (0.89 — 1.35) | 1.20 (0.97 — 1.47) | 1.01 (0.82 — 1.25) | 1.10 (0.88 — 1.37) |
| NO2 (10 ppb) | 1.47 (0.76 — 2.85) | 1.42 (0.77 — 2.61) | 1.34 (0.77 — 2.33) | 1.47 (0.79 — 2.77) | 1.29 (0.69 — 2.40) | 2.03 (1.11 — 3.69) | 1.36 (0.76 — 2.44) | 2.06 (1.14 — 3.71) |
| O3 (10 μg/m3) | 1.27 (0.96 — 1.70) | 0.97 (0.77 — 1.23) | 1.18 (0.93 — 1.50) | 1.01 (0.77 — 1.31) | 1.04 (0.80 — 1.34) | 1.16 (0.92 — 1.47) | 0.99 (0.76 — 1.28) | 1.12 (0.87 — 1.44) |
| Asian sand dust events§§ | 0.78 (0.41 — 1.49) | 0.79 (0.48 — 1.33) | 0.80 (0.45 — 1.42) | 0.77 (0.42 — 1.43) | 1.12 (0.65 — 1.92) | 1.35 (0.75 — 2.45) | 1.22 (0.70 — 2.11) | 1.18 (0.67 — 2.06) |

† Short Form-36 Health Survey Version 2

†† chronic obstructive pulmonary disease

‡ Global Initiative for Chronic Obstructive Lung Disease

‡‡ Temperature and relative humidity were included in each pollutant model

§ Exposures were included in the adjusted model separately

§§ Asian sand dust events: occurrence of Asian sand dust events during the 4 weeks before each survey.