**Supplementary table 1. Population Vulnerability to Extreme Cold Days and Extreme Heat Days in Rural and Urban Municipalities in Ten Provinces in Spain.** The vulnerability data for extreme heat days comes from (López-Bueno et al., 2021). Isocode is a meaningless numerical code that identifies each different isoclimatic zone.

Paired t-test

data: Vulnerability to cold and Vulnerability to heat.

t = 4.9611,

df = 41,

p-value = 6.355e-06

alternative hypothesis: true difference in means is greater than 0

95 percent confidence interval: (6.37, ∞)

mean of the differences: 9.64%.

|  |  |  |  |
| --- | --- | --- | --- |
| **Iscode** | **Urban** | **Vulnerability to cold** | **Vulnerability to heat** |
| 614101 | 0 | 0 | 0 |
| 614102 | 0 | 20 | 5 |
| 614102 | 1 | 20 | 16 |
| 614103 | 0 | 17 | 4 |
| 625001 | 0 | 0 | 0 |
| 625002 | 0 | 25 | 27 |
| 625003 | 0 | 34 | 9 |
| 625003 | 1 | 34 | 2 |
| 633301 | 0 | 18 | 4 |
| 633303 | 0 | 3 | 13 |
| 633304 | 0 | 24 | 5 |
| 633304 | 1 | 24 | 5 |
| 633305 | 0 | 0 | 8 |
| 674701 | 0 | 10 | 10 |
| 674701 | 1 | 10 | 0 |
| 690801 | 0 | 12 | 0 |
| 690802 | 0 | 18 | 13 |
| 690803 | 0 | 29 | 22 |
| 690803 | 1 | 29 | 7 |
| 690804 | 0 | 40 | 4 |
| 690804 | 1 | 19 | 16 |
| 700601 | 0 | 19 | 3 |
| 700601 | 1 | 19 | 25 |
| 700602 | 0 | 22 | 0 |
| 700603 | 0 | 35 | 7 |
| 700604 | 0 | 14 | 20 |
| 713201 | 0 | 4 | 0 |
| 713202 | 0 | 2 | 0 |
| 713202 | 1 | 31 | 10 |
| 713203 | 0 | 19 | 1 |
| 713204 | 0 | 1 | 0 |
| 722801 | 0 | 16 | 17 |
| 722802 | 0 | 12 | 2 |
| 722802 | 1 | 27 | 26 |
| 722803 | 0 | 18 | 24 |
| 752001 | 0 | 1 | 7 |
| 752001 | 1 | 5 | 11 |
| 752002 | 0 | 33 | 2 |
| 770301 | 0 | 25 | 0 |
| 770302 | 0 | 27 | 13 |
| 770303 | 0 | 28 | 29 |
| 770303 | 1 | 28 | 0 |

López-Bueno, J. A., Navas-Martín, M. A., Díaz, J., Mirón, I. J., Luna, M. Y., Sánchez-Martínez, G., Culqui, D., & Linares, C. (2021). Analysis of vulnerability to heat in rural and urban areas in Spain: What factors explain Heat’s geographic behavior? *Environmental Research*, 112213. https://doi.org/10.1016/j.envres.2021.112213

**Supplementary table 2. Statistics related to figure 2.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Temperature** | **mean** | **sd** | **n** | **ET** | **Lower limit** | **Upper limit** |
| -2 | 0.223 | 0.491 | 44 | 0.0740 | 0.0779 | 0.3679 |
| 0 | 0.224 | 0.410 | 137 | 0.0350 | 0.1555 | 0.2928 |
| 2 | 0.083 | 0.477 | 316 | 0.0268 | 0.0300 | 0.1352 |
| 4 | -0.009 | 0.540 | 413 | 0.0266 | -0.0608 | 0.0435 |
| 6 | -0.054 | 0.536 | 503 | 0.0239 | -0.1010 | -0.0073 |
| 8 | -0.069 | 0.486 | 396 | 0.0244 | -0.1170 | -0.0213 |
| 10 | -0.083 | 0.470 | 224 | 0.0314 | -0.1447 | -0.0216 |
| 12 | -0.089 | 0.402 | 60 | 0.0520 | -0.1907 | 0.0130 |
| 14 | -0.084 | 0.332 | 12 | 0.0960 | -0.2718 | 0.1045 |
| **Media estacional** | -0.01 | 0.51 | 2112 | 0.01 | -0.03 | 0.01 |

**Supplementary table 3. Full-model output.**

a

|  |
| --- |
| **Information criterion** |
| Looklikelihood ratio | 246,787 |
| Akaike Information Criterion | 252,787 |
| Hurvich & Tsai Information Criterion (AICC) | 253,929 |
| Bozdogan Criterion (CAIC) | 259,443 |
|  Bayesian Information Criterion | 256,443 |

b

|  |
| --- |
| **Fixed effect estimation** |
| Parameter | β | SE | df | t | Sig. | 95%IC |
| Lower limit | Upper limit |
| Intercept  | 37,870811 | 172,252586 | 14,829 | ,220 | ,829 | -329,645812 | 405,387435 |
| Winter tmin  | 1,983252 | ,975541 | 15,491 | 2,033 | ,060 | -,090338 | 4,056842 |
| BPP | 5,886415 | 7,184498 | 16,398 | ,819 | ,424 | -9,314050 | 21,086880 |
| Deprivation | 2,795289 | 56,585440 | 14,099 | ,049 | ,961 | -118,488750 | 124,079328 |
| Unemploiment  | ,027047 | 1,367903 | 21,414 | ,020 | ,984 | -2,814316 | 2,868410 |
| Temporary workers  | -,970636 | 1,126559 | 12,183 | -,862 | ,406 | -3,421104 | 1,479832 |
| Manual workers  | ,190738 | ,891132 | 10,944 | ,214 | ,834 | -1,771865 | 2,153341 |
| Unskilled workers | ,383816 | 1,661420 | 9,891 | ,231 | ,822 | -3,323575 | 4,091208 |
| Unskilled young people | ,375323 | ,970443 | 24,999 | ,387 | ,702 | -1,623348 | 2,373994 |
| Rurality | 1,302475 | 5,331400 | 23,061 | ,244 | ,809 | -9,724758 | 12,329707 |
| 65< | -,809372 | ,906961 | 23,206 | -,892 | ,381 | -2,684644 | 1,065900 |
| Dewelling in decline (DD) | -,934551 | 1,336429 | 20,077 | -,699 | ,492 | -3,721610 | 1,852509 |
| Good thermal Inertia (GTI) | -,425224 | ,347639 | 19,298 | -1,223 | ,236 | -1,152081 | ,301633 |
| Deficient thermal Inertia (DTI) | ,136618 | ,273213 | 14,767 | ,500 | ,624 | -,446524 | ,719760 |
| Dependent variable: Pthreshold. The variable named “Without internet” is out of the model due to collinearity.  |

**Supplementary table 4. Stepwise regression model.**

**a**

|  |
| --- |
| **Information criterion** |
| Akaike Information Criterion | 317,164 |
| Hurvich & Tsai Information Criterion (AICC) | 323,164 |
| Bozdogan Criterion (CAIC) | 323,830 |
|  Bayesian Information Criterion | 331,230 |
| Akaike Information Criterion | 328,230 |

b

|  |
| --- |
| **Fixed effect estimation** |
| Parameter | β | ES | df | t | Sig. | 95%CI |
| Lower limit | Upper limit |
| IR2001 | -6,201740 | 2,107925 | 37,693 | -2,942 | ,006 | -10,470153 | -1,933326 |
| desempleo | ,421447 | ,088664 | 15,295 | 4,753 | ,000 | ,232781 | ,610114 |
| Dependent variable: Pthreshold |