Does extreme temperature exposure take a toll on mental health?

Evidence from the China Health and Retirement Longitudinal Study

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ONLINE APPENDIX

Table A1. Main results of the basic model – with city-specific linear trend

Variables	(1) CES-D	(2) Somatic activity	(3) Depressed Reaction	(4) Positive reaction
Heat exposure days	0.0058	0.0047	0.0011	-0.0000
	(0.002)	(0.001)	(0.001)	(0.001)
Cold exposure days	0.0125	0.0086	0.0048	-0.0009
	(0.003)	(0.002)	(0.001)	(0.001)
Precipitation	-0.0030	-0.0030	0.0025	-0.0025
	(0.011)	(0.007)	(0.004)	(0.003)
Wind speed	0.1937	0.1244	0.0134	0.0560
	(0.143)	(0.093)	(0.054)	(0.042)
Sunshine duration	-0.0135	0.0332	0.0412	-0.0879
	(0.079)	(0.051)	(0.030)	(0.024)
Relative humidity	-0.0237	-0.0162	-0.0053	-0.0022
	(0.014)	(0.009)	(0.005)	(0.004)
Air pressure	0.0500	0.0410	0.0138	-0.0048
	(0.028)	(0.018)	(0.011)	(0.008)
PM2.5	0.0266	0.0216	0.0151	-0.0101
	(0.010)	(0.007)	(0.004)	(0.003)
City-specific linear trend	YES	YES	YES	YES
Observations	41,283	41,283	41,283	41,283

Notes: (1) All standard errors are clustered at the county/community level. (2) All models include all control variables and individual-, year-, and city- fixed effects. (3) All models are fixed-effect models.
*Data source:* CHARLS 2011, 2013, 2015 Survey Data.

Table A2. Heterogeneous effects

Variables	(1) >60	(2) <60	(3) Male	(4) Female	(5) Rural	(6) Urban
Heat exposure days	0.0070	0.0044	0.0047	0.0055	0.0064	0.0046
	(0.004)	(0.003)	(0.003)	(0.003)	(0.004)	(0.003)
Cold exposure days	0.0127	0.0098	0.0039	0.0188	0.0121	0.0114
	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)	(0.041)
Observations	19,992	21,291	19,551	21,728	16,383	24,900
Average depression scores	10.670	10.093	9.375	11.271	10.863	9.627

Notes: (1) All standard errors are clustered at the county/community level. (2) All models include all control variables and individual-, year-, and city- fixed effects. (3) All models are fixed effect models.
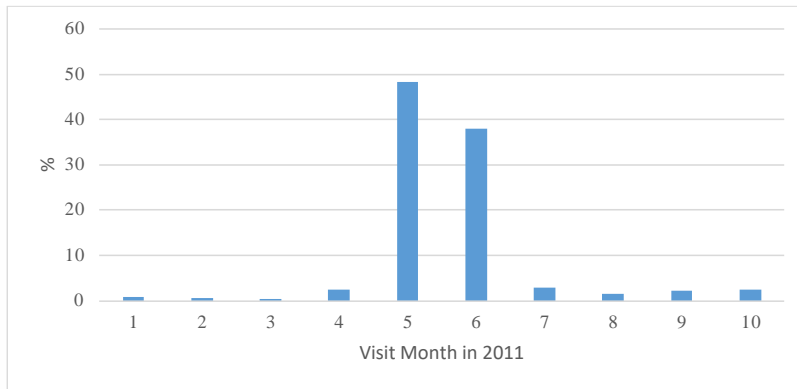*Data source:* CHARLS 2011, 2013, 2015 Survey Data.
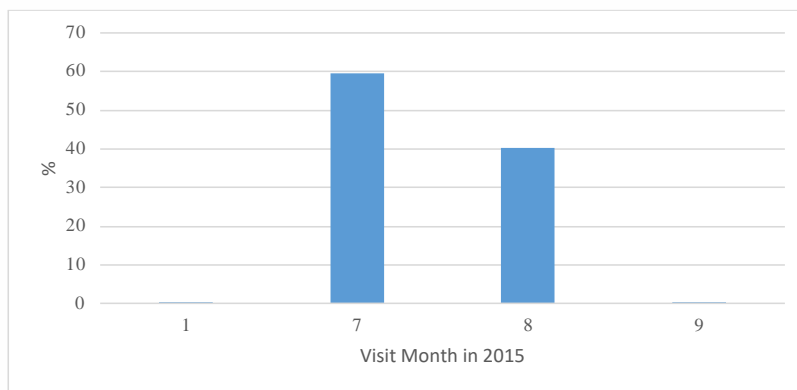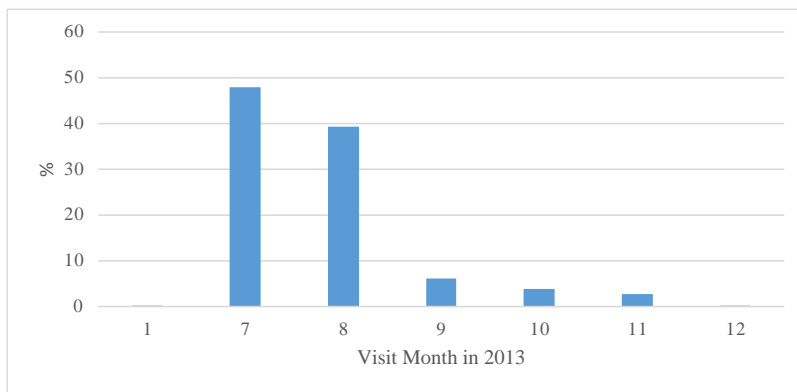
Figure A1. Distribution of interview visit month in CHARLS.
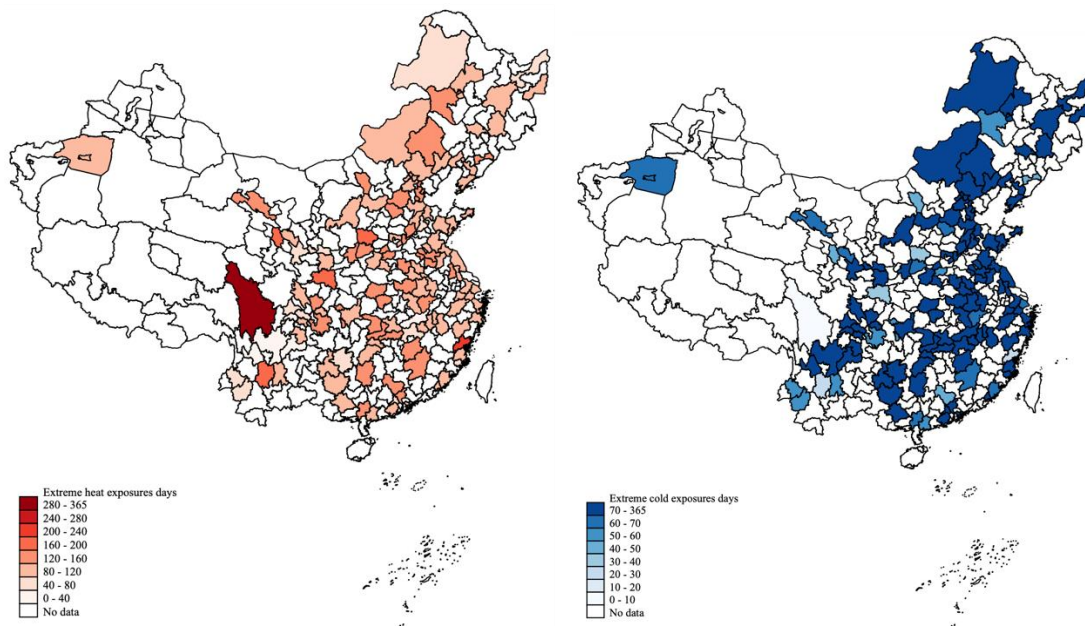
Figure A2. Extreme heat exposures in 2011 of CHARLS. **Figure A3.** Extreme cold exposures in 2011 of CHARLS.
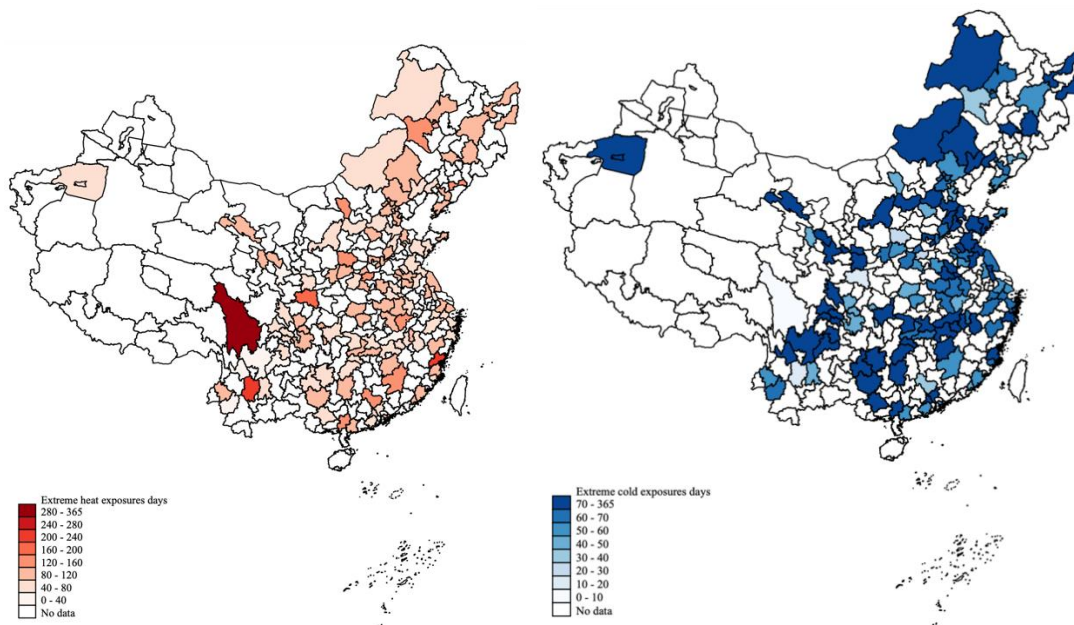

Figure A4. Extreme heat exposures in 2011 of CHARLS. **Figure A5.** Extreme cold exposures in 2011 of CHARLS.
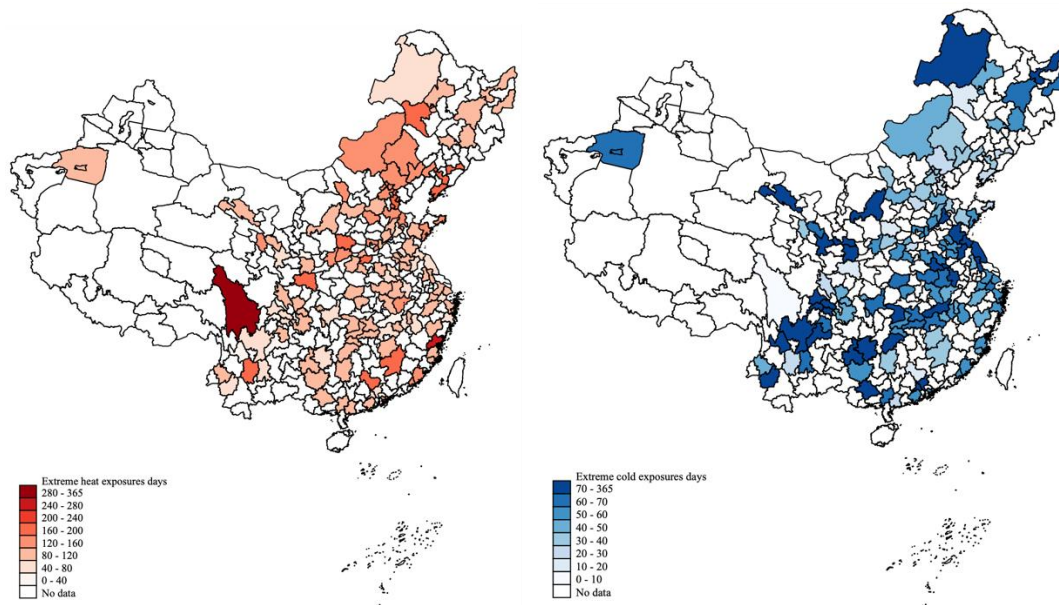
Figure A6. Extreme heat exposures in 2011 of CHARLS. **Figure A7.** Extreme cold exposures in 2011 of CHARLS.