Supplementary material for Pompili M. et al. 2015. Relationships of local lithium concentrations in drinking water to regional suicide rates in Italy. *The World Journal of Biological Psychiatry*, doi:10.3109/15622975.2015.1062551

Supplementary Table 1. Suicide Standardized Mortality Ratios (SMRs) and lithium levels in drinking water, based on weighted least-square regression modeling.

Model	Dependent variable	Independent variables	Total			Men			Women		
			Slope β	P-value	Adjusted r^2	Slope β	P-value	Adjusted r^2	Slope β	P-value	Adjusted r^2
Crude model 1.1	Average suicide SMR (1980–1989)	Lithium	-0.234	0.005	+0.048	-0.161	0.053	+0.018	-0.339	<0.001	+0.108
Adjusted model 1.2	Average suicide SMR (1980–1989)	Lithium	-0.044	0.560	+0.316	+0.013	0.859	+0.292	-0.154	0.043	+0.302
		Mountainous	+0.062	0.382		+0.071	0.326		+0.029	0.687	
		Urbanized	-0.002	0.974		-0.083	0.261		+0.168	0.022	
		South Italy	-0.557	<0.001		-0.546	<0.001		-0.463	<0.001	
Crude model 2.1	Average suicide SMR (1990–1999)	Lithium	-0.047	0.578	-0.005	-0.009	0.915	-0.007	-0.165	0.047	+0.020
Adjusted model 2.2	Average suicide SMR (1990–1999)	Lithium	+0.079	0.323	+0.203	+0.087	0.280	+0.196	<0.001	0.998	+0.186
		Mountainous	+0.122	0.114		+0.137	0.078		0.054	0.485	
		Urbanized	-0.142	0.070		-0.212	0.008		0.087	0.270	
		South Italy	-0.437	<0.001		-0.381	<0.001		-0.446	<0.001	
Crude model 3.1	Average suicide SMR (2000–2011)	Lithium	<0.001	0.997	-0.007	+0.046	0.581	-0.005	-0.134	0.109	+0.011
Adjusted model 3.2	Average suicide SMR (2000–2011)	Lithium	+0.079	0.308	+0.261	+0.107	0.159	+0.281	-0.032	0.703	+0.134
		Mountainous	+0.144	0.053		+0.181	0.014		+0.021	0.796	
		Urbanized	-0.312	<0.001		-0.341	<0.001		-0.125	0.125	
		South Italy	-0.377	<0.001		-0.341	<0.001		-0.363	<0.001	

Values in boldface are statistically significant.

Supplementary Table 2. Estimated Average Annual Percentage Change in Suicide Rates from 1980 to 2011 with corresponding 95% Confidence Intervals.

Groups	Estimated Average Annual Percentage Change (EAAPC) [95% CI] in Suicide Rates [1980 to 2011]	
	Study municipalities	All Italy
Men	-1.53 [-2.92 to -0.11]	-0.94 [-0.26 to -2.69]
Women	-2.67 [-3.23 to -2.11]	-2.21 [-2.67 to -2.69]
Total	-1.73 [-2.24 to -1.22]	-1.12 [-1.59 to -0.65]

EAAPC: based on Joinpoint regression analysis <http://surveillance.cancer.gov/joinpoint/aapc.html>), and considered significant if the confidence interval (CI) does not include zero. The analysis was applied to the age-adjusted rates (and their standard errors).

Supplementary Table 3. Pearson correlation (unweighted) between local characteristics and lithium levels in tap water.

Factors versus water lithium concentration	<i>r</i> (<i>P</i> -value)
Location south of Rome	0.13 (0.135)
Mountainous region	-0.09 (0.267)
Highly urbanized area	-0.03 (0.683)