

Supplemental Materials

Table S1. Sample size and state-level variables for each state.

State	Sample size	Number of years State EITC available (1988-2014)	Average SNAP benefits per person (2017)	Medicaid Generosity Score (1987-2007)	Gini index (2017)	Social capital index (2018)	Tobacco tax (cents per pack; 2017)
Alabama	6,300	0	\$120	267.2	0.4776	-0.94	68
Alaska	2,981	0	\$179	397.5	0.4180	0.39	200
Arizona	14,404	0	\$121	310.3	0.4690	-1.33	200
Arkansas	5,059	0	\$110	287.9	0.4732	-1.29	115
California	8,404	0	\$136	385.4	0.4889	-0.85	287
Colorado	9,036	3	\$127	285.9	0.4589	1.14	84
Connecticut	9,946	3	\$133	376.4	0.4950	0.61	390
Delaware	3,813	9	\$120	330.4	0.4570	-0.56	160
Florida	20,315	0	\$125	329.4	0.4858	-1.50	134
Georgia	5,558	0	\$130	310.6	0.4821	-0.88	37
Hawaii	7,204	0	\$236	382.6	0.4404	-0.35	320
Idaho	4,521	0	\$114	247.1	0.4478	0.69	57
Illinois	5,166	15	\$130	328.3	0.4809	-0.22	198
Indiana	12,954	12	\$118	274.6	0.4505	0.14	100
Iowa	7,082	25	\$110	366.1	0.4427	1.07	129
Kansas	19,985	17	\$114	319.7	0.4560	0.61	60
Kentucky	7,916	0	\$120	346.3	0.4762	-0.63	108
Louisiana	4,435	7	\$129	316.7	0.4910	-2.15	136
Maine	9,250	15	\$109	375.2	0.4529	1.09	200
Maryland	12,857	27	\$120	371.7	0.4520	-0.09	200
Massachusetts	6,318	18	\$126	449.5	0.4831	0.38	351
Michigan	9,922	7	\$125	349.9	0.4656	-0.14	200
Minnesota	15,707	18	\$111	427.6	0.4501	1.81	359
Mississippi	4,785	0	\$115	225.4	0.4781	-1.15	68
Missouri	6,978	0	\$123	269.1	0.4630	-0.02	17
Montana	5,484	0	\$119	356.8	0.4607	0.76	170
Nebraska	14,215	12	\$115	417.3	0.4427	1.09	64
Nevada	3,480	0	\$118	286.0	0.4528	-1.73	180
New Hampshire	5,486	0	\$102	363.0	0.4354	1.45	178
New Jersey	10,998	15	\$114	322.9	0.4802	-0.29	270
New Mexico	6,152	8	\$121	312.0	0.4764	-1.50	166
New York	11,192	21	\$136	410.1	0.5129	-0.98	435
North Carolina	4,479	7	\$131	343.3	0.4761	-0.46	45

North Dakota	6,548	0	\$121	316.6	0.4589	0.98	44
Ohio	11,529	1	\$124	321.9	0.4644	-0.26	160
Oklahoma	6,122	13	\$121	254.4	0.4654	-0.71	103
Oregon	4,906	18	\$124	386.0	0.4615	0.79	132
Pennsylvania	5,955	0	\$121	325.4	0.4705	-0.01	260
Rhode Island	5,304	27	\$137	409.5	0.4748	0.24	375
South Carolina	10,619	0	\$123	273.5	0.4706	-0.64	57
South Dakota	6,575	0	\$126	259.3	0.4462	1.01	153
Tennessee	5,416	0	\$126	311.0	0.4801	-0.70	62
Texas	11,380	0	\$123	254.3	0.4803	-1.00	141
Utah	9,096	0	\$116	341.5	0.4261	2.08	170
Vermont	6,108	27	\$123	417.6	0.4468	1.37	308
Virginia	8,980	9	\$120	297.3	0.4666	0.63	30
Washington	12,260	0	\$122	389.5	0.4569	0.73	303
West Virginia	5,170	0	\$118	333.2	0.4620	-0.45	120
Wisconsin	5,386	26	\$106	433.9	0.4441	1.61	252
Wyoming	4,202	0	\$119	289.4	0.4293	0.86	60

Note:

- a. Sample size = sample size of individual-level data from 2017 BRFSS.
- b. SNAP = Supplemental Nutrition Assistance Program.

Table S2. Pearson correlation matrix for state-level variables (N=50).

	EITC	SNAP	MGS	Gini	SCI
SNAP	-0.193				
MGS	0.511	0.124			
Gini	-0.108	0.054	-0.092		
SCO	0.340	-0.220	0.414	-0.683	
Tobacco Taxes	0.319	0.265	0.667	0.241	0.110

Note:

a. EITC = Earned Income Tax Credit; SNAP = Supplemental Nutrition Assistance Program; MGS = Medicaid Generosity Score; Gini = Gini index; SCI = Social Capital Index.

Table S3. Prevalence of arthritis-attributable moderate/severe joint pain in adults aged 25-80, by state and level of education, adjusted for age and other demographic characteristics.

State	All	<HS	HS/SC	BA+	Education Gap
Alabama	0.216	0.373	0.218	0.090	0.283
Alaska	0.091	0.188	0.102	0.041	0.147
Arizona	0.130	0.218	0.142	0.060	0.158
Arkansas	0.214	0.380	0.213	0.083	0.297
California	0.085	0.126	0.099	0.038	0.088
Colorado	0.085	0.150	0.106	0.040	0.109
Connecticut	0.101	0.219	0.120	0.045	0.175
Delaware	0.134	0.206	0.153	0.062	0.144
Florida	0.134	0.242	0.151	0.061	0.181
Georgia	0.124	0.216	0.138	0.051	0.165
Hawaii	0.075	0.173	0.083	0.035	0.138
Idaho	0.105	0.176	0.119	0.043	0.133
Illinois	0.113	0.216	0.132	0.046	0.170
Indiana	0.153	0.261	0.165	0.062	0.200
Iowa	0.096	0.182	0.108	0.039	0.143
Kansas	0.111	0.223	0.127	0.050	0.173
Kentucky	0.213	0.381	0.212	0.084	0.297
Louisiana	0.161	0.292	0.162	0.065	0.227
Maine	0.127	0.249	0.143	0.057	0.192
Maryland	0.119	0.256	0.145	0.054	0.202
Massachusetts	0.110	0.217	0.137	0.051	0.166
Michigan	0.157	0.309	0.173	0.065	0.243
Minnesota	0.069	0.145	0.081	0.030	0.114
Mississippi	0.203	0.363	0.198	0.080	0.283
Missouri	0.147	0.304	0.155	0.059	0.245
Montana	0.113	0.240	0.126	0.049	0.190
Nebraska	0.096	0.171	0.111	0.040	0.131
Nevada	0.103	0.141	0.119	0.044	0.097
New Hampshire	0.107	0.226	0.126	0.048	0.178
New Jersey	0.120	0.233	0.145	0.053	0.179
New Mexico	0.144	0.234	0.156	0.070	0.164
New York	0.110	0.189	0.131	0.048	0.141
North Carolina	0.144	0.272	0.152	0.057	0.214
North Dakota	0.100	0.217	0.111	0.041	0.176
Ohio	0.153	0.314	0.162	0.061	0.253
Oklahoma	0.162	0.274	0.175	0.069	0.205
Oregon	0.103	0.194	0.118	0.045	0.148
Pennsylvania	0.122	0.246	0.140	0.050	0.196
Rhode Island	0.138	0.250	0.156	0.060	0.190
South Carolina	0.169	0.323	0.174	0.069	0.254

South Dakota	0.099	0.187	0.109	0.041	0.146
Tennessee	0.167	0.329	0.170	0.065	0.264
Texas	0.136	0.230	0.149	0.056	0.174
Utah	0.077	0.135	0.091	0.034	0.101
Vermont	0.112	0.255	0.128	0.051	0.204
Virginia	0.126	0.269	0.146	0.053	0.215
Washington	0.099	0.166	0.120	0.044	0.122
West Virginia	0.231	0.407	0.230	0.096	0.311
Wisconsin	0.116	0.222	0.131	0.049	0.173
Wyoming	0.112	0.203	0.127	0.049	0.153
Mean	0.129	0.240	0.142	0.055	0.185

Notes:

- a. All prevalences are adjusted for age, sex, race/ethnicity, and percentage of immigrants. All estimates are sample weight-adjusted.
- b. <HS = less than high school; HS/SC = high school or some college; BA+ = bachelor's degree or above.
- c. Education Gap = prevalence for <HS group – prevalence for BA+ group.

Table S4. Multilevel logistic regression of arthritis-attributable moderate/severe joint pain on individual- and state-level factors, adding state-level factors individually.

	<u>Model S4.1</u>	<u>Model S4.2</u>	<u>Model S4.3</u>	<u>Model S4.4</u>	<u>Model S4.5</u>	<u>Model S4.6</u>
	OR (95%CI)	OR (95%CI)	OR (95%CI)	OR (95%CI)	OR (95%CI)	OR (95%CI)
<i>Individual-level factors</i>						
Education (ref: BA+)						
< HS	5.378*** (4.921-5.878)	5.382*** (4.923-5.883)	5.379*** (4.920-5.882)	5.388*** (4.930-5.890)	5.375*** (4.917-5.877)	5.384*** (4.929-5.881)
HS/SC	2.699*** (2.573-2.831)	2.688*** (2.559-2.824)	2.677*** (2.550-2.811)	2.677*** (2.543-2.818)	2.677*** (2.546-2.815)	2.688*** (2.559-2.823)
Age	1.029*** (1.027-1.031)	1.029*** (1.027-1.031)	1.029*** (1.027-1.031)	1.029*** (1.027-1.031)	1.029*** (1.027-1.031)	1.029*** (1.027-1.031)
Sex (ref: male)						
Female	1.732*** (1.666-1.801)	1.732*** (1.666-1.801)	1.732*** (1.666-1.801)	1.732*** (1.666-1.801)	1.732*** (1.666-1.801)	1.732*** (1.666-1.801)
Race (ref: whites)						
Blacks	1.518*** (1.417-1.628)	1.519*** (1.617-1.628)	1.517*** (1.416-1.626)	1.513*** (1.411-1.622)	1.509*** (1.407-1.618)	1.518*** (1.416-1.627)
Hispanics	0.785** (0.682-0.904)	0.784** (0.681-0.904)	0.785** (0.681-0.904)	0.783** (0.680-0.901)	0.783** (0.681-0.900)	0.784** (0.682-0.902)
Other	1.220*** (1.113-1.337)	1.224*** (1.120-1.337)	1.212*** (1.113-1.336)	1.222*** (1.117-1.337)	1.211*** (1.103-1.330)	1.210*** (1.113-1.337)
<i>State-level factors</i>						
Percentage of immigrants	0.923** (0.877-0.912)	0.939* (0.893-0.989)	0.943* (0.894-0.995)	0.841*** (0.790-0.896)	0.861*** (0.818-0.906)	0.954 (0.898-1.013)
EITC	0.954 (0.896-1.015)					
SNAP		0.938** (0.898-0.981)				
MGS			0.908** (0.854-0.965)			

Gini				1.189***		
				(1.123-1.258)		
SCI					0.823***	
					(0.778-0.870)	
Tobacco						0.935†
						(0.871-1.005)
<i>Random effects</i>						
State (variance)	0.067	0.063	0.055	0.039	0.029	0.064
	(0.048-0.095)	(0.042-0.095)	(0.038-0.082)	(0.026-0.060)	(0.019-0.045)	(0.046-0.090)
Education (variance)						
< HS	0.013	0.013	0.015	0.012	0.015	0.013
	(0.004-0.041)	(0.004-0.039)	(0.005-0.043)	(0.004-0.034)	(0.005-0.043)	(0.004-0.038)
HS/SC	0.004	0.002	0.003	0.000	0.003	0.003
	(0.001-0.013)	(0.000-0.010)	(0.001-0.010)	(0.000-0.036)	(0.001-0.012)	(0.001-0.010)

Notes: †p < .1. *p < .05. **p < .01. ***p < .001.

a. All models are sample weight-adjusted.

b. All state-level variables are standardized as Z-scores.

c. OR = odds ratio; CI = confidence interval; <HS = below high school; HS/SC = high school or some college; BA + = bachelor's degree or above; EITC = Earned Income Tax Credit; SNAP = Supplemental Nutrition Assistance Program; MGS = Medicaid Generosity Score; Gini = Gini index; SCI = Social Capital Index; Tobacco = tobacco taxes.

Table S5. Multilevel logistic regression of arthritis-attributable moderate/severe joint pain on individual-level factors and a *single* state-level variable, with interactions between education and the state variable.

State variable in interaction:	Model S5.1 EITC	Model S5.2 SNAP	Model S5.3 MGS	Model S5.4 Gini	Model S5.5 SCI	Model S5.6 Tobacco
	OR	OR	OR	OR	OR	OR
	(95% CI)					
Main effect of education (ref: BA+)						
<HS	5.382*** (4.925-5.881)	5.381*** (4.921-5.883)	5.385*** (4.925-5.887)	5.378*** (4.920-5.879)	5.385*** (4.931-5.881)	5.380*** (4.924-5.878)
HS/SC	2.688*** (2.557-2.826)	2.682*** (2.552-2.819)	2.683*** (2.558-2.813)	2.681*** (2.550-2.819)	2.673 (2.542-2.812)	2.693*** (2.567-2.824)
Main effect of structural factor	0.939* (0.884-0.997)	0.953** (0.920-0.987)	0.891*** (0.844-0.942)	1.143*** (1.079-1.211)	0.824*** (0.772-0.879)	0.910** (0.857-0.966)
Interaction with < HS	1.028 (0.963-1.098)	0.998 (0.963-1.034)	1.034 (0.965-1.107)	1.055 (0.979-1.137)	1.013 (0.933-1.100)	1.017 (0.957-1.082)
Interaction with HS/SC	1.019 (0.976-1.063)	0.977 (0.921-1.036)	1.025 (0.976-1.076)	1.042† (1.000-1.085)	0.997 (0.945-1.052)	1.031 (0.986-1.078)

Notes: †p < .1. *p < .05. **p < .01. ***p < .001.

a. All models are sample weight-adjusted and are analyzed using multilevel logistic regression with random intercepts and education slopes, controlling for all covariates except the other five state-level predictors.

b. All state-level variables are standardized as Z-scores.

c. OR = odds ratio; CI = confidence interval; <HS = below high school; HS/SC = high school or some college; Bachelor + = bachelor's degree or above; EITC = Earned Income Tax Credit; SNAP = Supplemental Nutrition Assistance Program; MGS = Medicaid Generosity Score; Gini = Gini index; SCI = Social Capital Index; Tobacco = tobacco taxes.

Table S6. Sex-stratified multilevel logistic regression of arthritis-attributable moderate/severe joint pain on individual- and state-level factors, among adults aged 25-80.

	Men			Women		
	Model S6.1 OR (95% CI)	Model S6.2 OR (95% CI)	Model S6.3 OR (95% CI)	Model S6.4 OR (95% CI)	Model S6.5 OR (95% CI)	Model S6.6 OR (95% CI)
<i>Individual-level factors</i>						
Education (ref: BA+)						
< HS		5.553*** (4.935-6.248)	5.518*** (4.901-6.213)		5.323*** (4.841-5.854)	5.326*** (4.850-5.850)
HS/SC		2.792*** (2.616-2.980)	2.791*** (2.610-2.985)		2.657*** (2.535-2.786)	2.644*** (2.512-2.782)
Age	1.033*** (1.031-1.035)	1.032*** (1.030-1.034)	1.032*** (1.030-1.034)	1.032*** (1.030-1.034)	1.028*** (1.026-1.030)	1.027*** (1.025-1.029)
Race (ref: whites)						
Blacks	1.741*** (1.584-1.913)	1.461*** (1.329-1.606)	1.443*** (1.314-1.584)	1.763*** (1.603-1.938)	1.563*** (1.435-1.703)	1.544*** (1.414-1.686)
Hispanics	1.053 (0.900-1.233)	0.688*** (0.577-0.820)	0.684*** (0.575-0.814)	1.299*** (1.152-1.464)	0.847* (0.730-0.982)	0.841* (0.727-0.972)
Other	1.306*** (1.156-1.475)	1.283*** (1.142-1.442)	1.291*** (1.156-1.443)	1.205** (1.078-1.348)	1.171** (1.054-1.302)	1.179*** (1.066-1.303)
<i>State-level factors</i>						
Percentage of immigrants	0.842*** (0.773-0.917)	0.888** (0.823-0.959)	0.825*** (0.752-0.906)	0.875*** (0.813-0.942)	0.921** (0.876-0.969)	0.876*** (0.832-0.923)
EITC			1.007 (0.948-1.070)			1.023 (0.978-1.071)
SNAP			0.935** (0.895-0.978)			0.926*** (0.895-0.959)
MGS			1.050 (0.958-1.151)			0.982 (0.930-1.038)
Gini			1.026 (0.963-1.093)			1.069* (1.016-1.124)

SCI			0.803***			0.849***
			(0.723-0.892)			(0.800-0.901)
Tobacco			1.013			1.009
			(0.930-1.104)			(0.946-1.077)
<i>Random effects</i>						
State (variance)	0.086	0.067	0.027	0.076	0.064	0.019
	0.054-0.135)	(0.042-0.104)	(0.015-0.049)	(0.051-0.114)	(0.044-0.093)	(0.011-0.033)
Education (variance)						
< HS		0.028	0.032		0.020	0.020
		(0.010-0.078)	(0.013-0.078)		(0.007-0.055)	(0.007-0.057)
HS/SC		0.000	0.000		0.008	0.006
		(0.000-0.178)	(0.000-0.291)		(0.003-0.019)	(0.002-0.017)

Notes: †p < .1. *p < .05. **p < .01. ***p < .001.

a. All models are sample weight-adjusted.

b. All state-level variables are standardized as Z-scores.

c. OR = odds ratio; CI = confidence interval; <HS = below high school; HS/SC = high school or some college; Bachelor + = bachelor's degree or above; EITC = Earned Income Tax Credit; SNAP = Supplemental Nutrition Assistance Program; MGS = Medicaid Generosity Score; Gini = Gini index; SCI = Social Capital Index; Tobacco = tobacco taxes.

Table S7. Sex-stratified multilevel logistic regression of arthritis-attributable moderate/severe joint pain on individual-level factors and a *single* state-level variable, with interactions between education and the state variable.

	Model S7.1	Model S7.2	Model S7.3	Model S7.4	Model S7.5	Model S7.6
State variable in interaction:	EITC	SNAP	MGS	Gini	SCI	Tobacco
	OR (95% CI)					
Panel A: Men						
Main effect of education (ref: BA+)						
<HS	5.513*** (4.896-6.208)	5.518*** (4.909-6.203)	5.513*** (4.899-6.204)	5.515*** (4.890-6.220)	0.520*** (4.898-6.221)	5.510*** (4.904-6.191)
HS/SC	2.792*** (2.612-2.985)	2.795*** (2.613-2.989)	2.794*** (2.609-2.993)	2.795*** (2.615-2.986)	2.792*** (2.611-2.986)	2.795*** (2.617-2.985)
Main effect of structural factor	0.986 (0.922-1.054)	0.969 (0.900-1.043)	1.035 (0.935-1.145)	0.989 (0.913-1.071)	0.810*** (0.728-0.901)	1.002 (0.930-1.080)
Interaction with < HS	1.040 (0.936-1.156)	0.948† (0.897-1.001)	1.000 (0.909-1.101)	1.055 (0.943-1.180)	0.990 (0.889-1.103)	0.972 (0.885-1.068)
Interaction with HS/SC	1.026 (0.968-1.087)	0.962 (0.990-1.027)	1.023 (0.959-1.090)	1.042 (0.985-1.102)	0.989 (0.929-1.052)	1.020 (0.962-1.082)
Panel B: Women						
Main effect of education (ref: BA+)						
<HS	5.320*** (4.840-5.847)	5.322*** (4.848-5.844)	5.342*** (4.858-5.874)	5.312*** (4.839-5.832)	5.342*** (4.858-5.874)	5.333*** (4.856-5.856)

HS/SC	2.641***	2.643***	2.644***	2.645***	2.649***	2.640***
	(2.508-2.780)	(2.511-2.782)	(2.514-2.781)	(2.516-2.780)	(2.517-2.787)	(2.512-2.775)
Main effect of structural factor	1.001	0.935*	1.035	1.030	0.850***	0.974
	(0.953-1.053)	(0.884-0.988)	(0.903-1.014)	(0.971-1.092)	(0.791-0.914)	(0.918-1.034)
Interaction with < HS	1.019	1.036	1.000	1.056	1.027	1.046
	(0.949-1.094)	(0.990-1.083)	(0.972-1.138)	(0.969-1.150)	(0.937-1.125)	(0.966-1.133)
Interaction with HS/SC	1.025	1.025	1.022	1.051*	0.997	1.037
	(0.983-1.069)	(0.930-1.032)	(0.978-1.078)	(1.005-1.099)	(0.944-1.054)	(0.991-1.085)

Notes: †p < .1. *p < .05. **p < .01. ***p < .001.

- a. All models are sample weight-adjusted and are analyzed using multilevel logistic regression with random intercepts and education slopes, controlling for all covariates. Other five state-level predictors are excluded from models when estimating one state factor.
- b. All state-level variables are standardized as Z-scores.
- c. <HS = below high school; HS/SC = high school or some college; Bachelor + = bachelor's degree or above; EITC = Earned Income Tax Credit; SNAP = Supplemental Nutrition Assistance Program; MGS = Medicaid Generosity Score; Gini = Gini index; SCI = Social Capital Index; Tobacco = tobacco taxes.

Table S8. Multilevel logistic regression of arthritis on individual- and state-level factors, among adults aged 25-80.

	Model S8.1		Model S8.2		Model S8.3	
	OR (95% CI)		OR (95% CI)		OR (95% CI)	
<i>Individual-level factors</i>						
Education (ref: BA+)						
< HS			2.057***	(1.924-2.200)	2.055***	(1.923-2.197)
HS/SC			1.577***	(1.536-1.620)	1.575***	(1.534-1.617)
Age	1.054***	(1.053-1.056)	1.053***	(1.052-1.054)	1.053***	(1.052-1.054)
Sex (ref: male)						
Female	1.447***	(1.408-1.488)	1.457***	(1.418-1.496)	1.457***	(1.418-1.496)
Race (ref: whites)						
Blacks	1.046†	(0.992-1.104)	0.973	(0.924-1.025)	0.970	(0.920-1.022)
Hispanics	0.718***	(0.659-0.782)	0.606***	(0.546-0.673)	0.606***	(0.546-0.672)
Other	0.884*	(0.803-0.973)	0.879**	(0.804-0.961)	0.880**	(0.806-0.962)
<i>State-level factors</i>						
Percentage of immigrants	0.872***	(0.831-0.915)	0.896***	(0.857-0.937)	0.859***	(0.805-0.917)
EITC					1.026	(0.974-1.081)
SNAP					0.970	(0.935-1.006)
MGS					0.989	(0.928-1.054)
Gini					1.006	(0.955-1.061)
SCI					0.893**	(0.825-0.967)
Tobacco					1.036	(0.960-1.117)
<i>Random effects</i>						
State (variance)	0.038	(0.024-0.061)	0.032	(0.020-0.052)	0.021	(0.013-0.034)
Education (variance)			0.021	(0.011-0.042)	0.021	(0.011-0.041)
< HS			0.001	(0.000-0.055)	0.000	(0.000-0.020)
HS/SC						

Notes: †p < .1. *p < .05. **p < .01. ***p < .001.

a. All models are sample weight-adjusted and are analyzed using multilevel logistic regressions with random intercepts and education slopes, controlling for all covariates and structural variables.

b. All state-level variables are standardized as Z-scores.

c. OR = odds ratio; CI = confidence interval; <HS = below high school; HS/SC = high school or some college; BA + = bachelor's degree or above; EITC = Earned Income Tax Credit; SNAP = Supplemental Nutrition Assistance Program; MGS = Medicaid Generosity Score; Gini = Gini index; SCI = Social Capital Index; Tobacco = tobacco taxes.

Table S9 Multilevel logistic regression of arthritis on individual- and state-level predictors, with interactions between education and state-level variables.

State variable in interaction:	Model S9.1 EITC OR (95% CI)	Model S9.2 SNAP OR (95% CI)	Model S9.3 MGS OR (95% CI)	Model S9.4 Gini OR (95% CI)	Model S9.5 SCI OR (95% CI)	Model S9.6 Tobacco OR (95% CI)
Main effect of education (ref: BA+)						
<HS	2.061*** (1.928-2.204)	2.057*** (1.925-2.198)	2.051*** (1.921-2.190)	2.061*** (1.927-2.205)	2.063*** (1.931-2.203)	2.050*** (1.922-2.187)
HS/SC	1.576*** (1.534-1.620)	1.575*** (1.534-1.618)	1.576*** (1.534-1.619)	1.581*** (1.543-1.621)	1.582*** (1.541-1.624)	1.576*** (1.534-1.618)
Main effect of state-level variable	1.027 (0.978-1.078)	0.981 (0.943-1.021)	0.988 (0.928-1.052)	0.977 (0.926-1.030)	0.915* (0.847-0.988)	1.036 (0.962-1.116)
Interaction with < HS	0.997 (0.947-1.049)	0.978 (0.935-1.024)	0.970 (0.922-1.021)	1.019 (0.959-1.082)	0.982 (0.920-1.048)	0.957* (0.918-0.998)
Interaction with HS/SC	0.999 (0.977-1.021)	0.985 (0.964-1.006)	1.001 (0.979-1.024)	1.047*** (1.024-1.071)	0.969* (0.845-0.993)	1.004 (0.983-1.026)

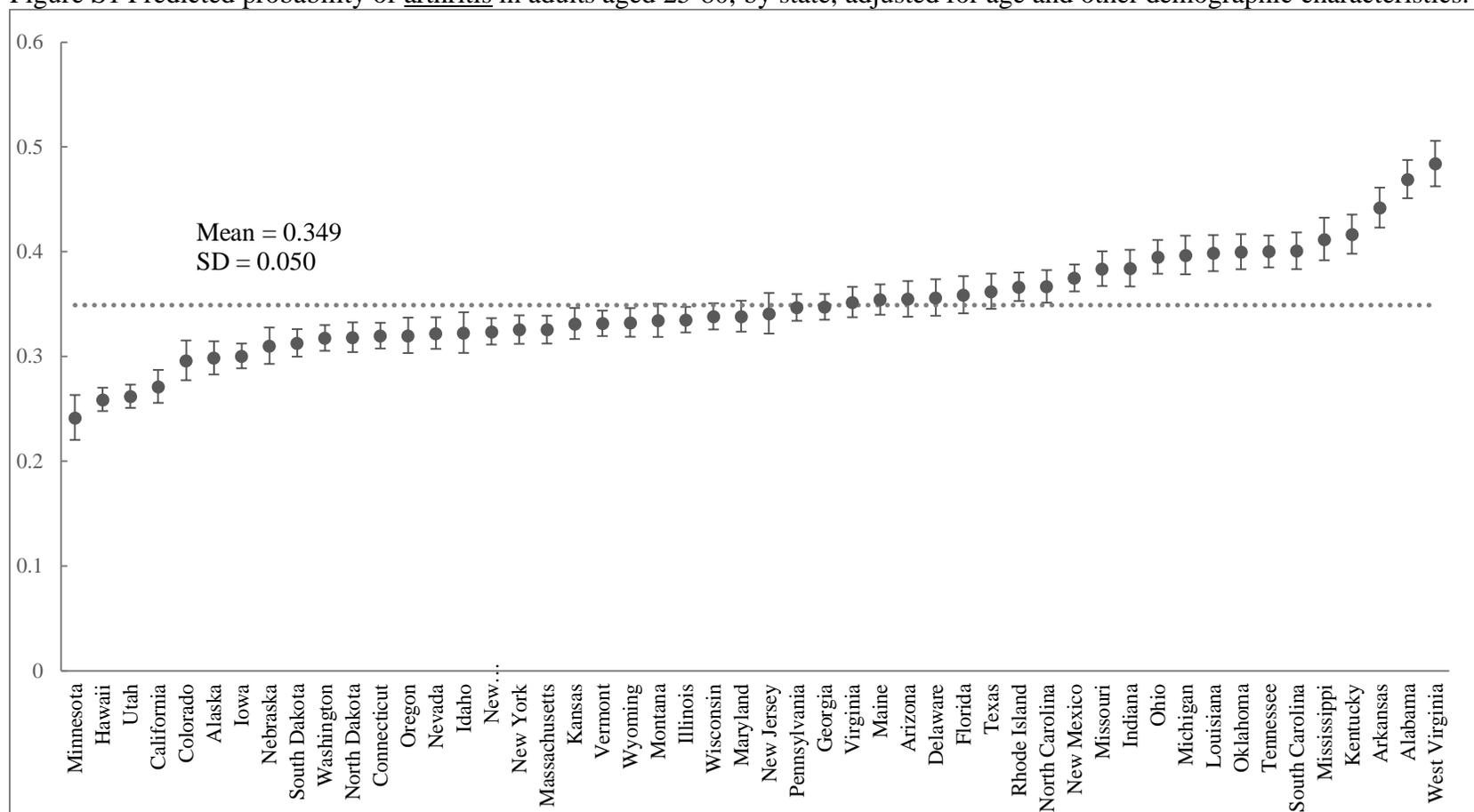
Notes: †p < .1. *p < .05. **p < .01. ***p < .001.

a. All models are sample weight-adjusted and are analyzed using multilevel logistic regressions with random intercepts and education slopes, controlling for all covariates and structural variables.

b. All state-level variables are standardized as Z-scores.

c. OR = odds ratio; CI = confidence interval; <HS = below high school; HS/SC = high school or some college; BA + = bachelor's degree or above; EITC = Earned Income Tax Credit; SNAP = Supplemental Nutrition Assistance Program; MGS = Medicaid Generosity Score; Gini = Gini index; SCI = Social Capital Index; Tobacco = tobacco taxes.

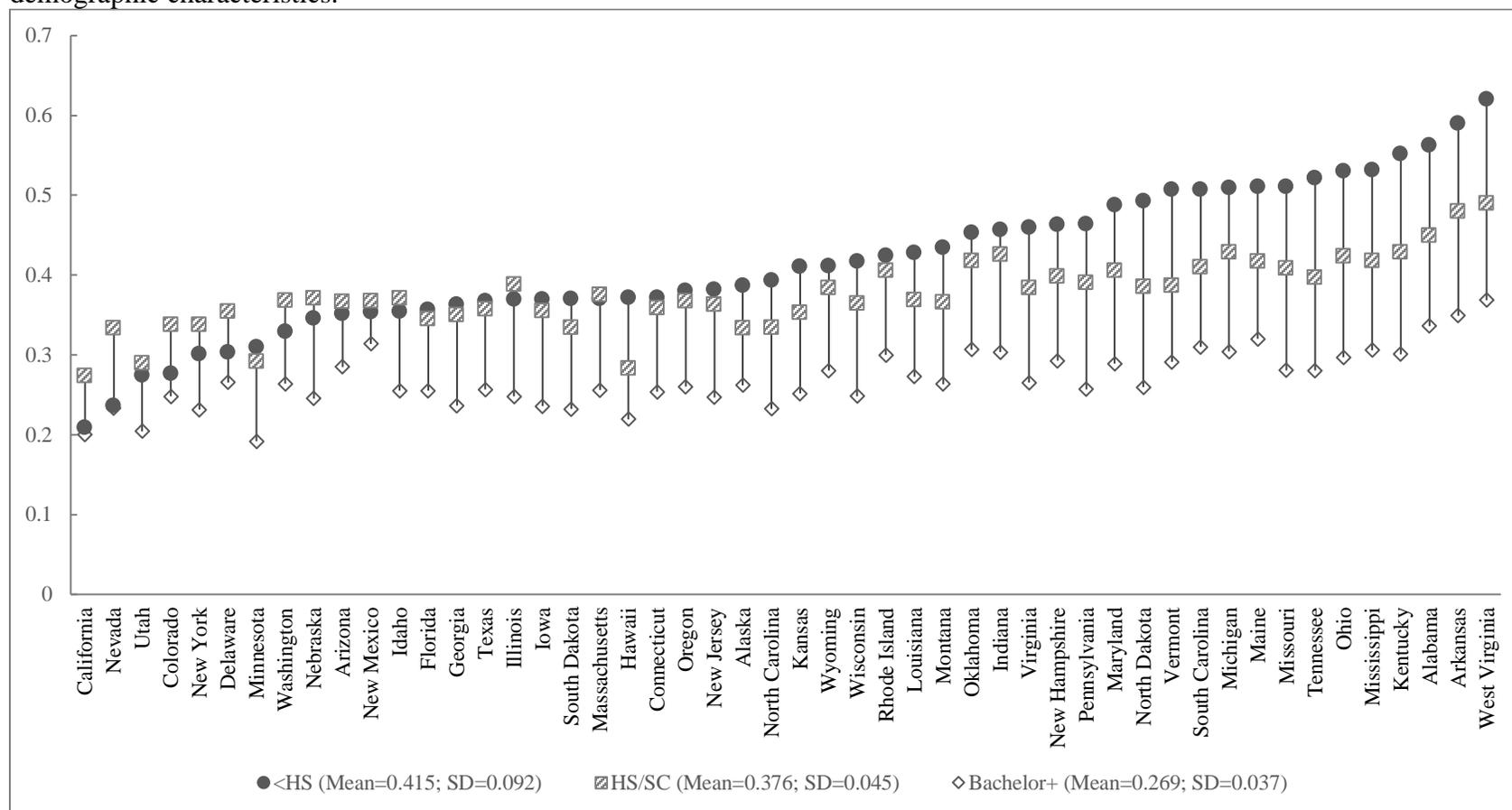
Figure S1 Predicted probability of arthritis in adults aged 25-80, by state, adjusted for age and other demographic characteristics.



Notes:

- Predicted probabilities are adjusted for age, sex, race/ethnicity, and state's percentage of immigrants. All estimates are sample weight-adjusted.
- Bars show 95% confidence intervals.

Figure S2. Predicted probability of arthritis in adults aged 25-80, by state and level of education, adjusted for age and other demographic characteristics.



Notes:

- Predicted probabilities are adjusted by age, sex, race and percentage of immigrants. All estimates are sample weight-adjusted.
- <HS = less than high school; HS/SC = high school or some college; BA+ = bachelor's degree or above.