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***Unequal Hopes, Lives, and Lifespans in the U.S.:  
Some Insights from the New Science of Well-Being***

***Keynote Address  
Australian Conference of Economists***

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# New Metrics for Looking at Inequality of Outlooks and Outcomes: Economics of Happiness/Well-Being

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- The pursuit of happiness is in the U.S. Declaration of Independence – not about guaranteed outcomes but about opportunities to seek fulfilling lives; grounded in Aristotle and Mill; combines individual freedom and social fairness.
- U.S. is more unequal by any number of measures; is the American Dream and the right to the pursuit of happiness equally available to all citizens today?
- My research explores why the increasingly unequal distributions of income, well-being, and beliefs in future opportunity matter today and in the future; 2016 election results one very stark marker; rising U.S. mortality rates an even starker one
- Based on *Happiness for All? Unequal Hopes and Lives in Pursuit of the American Dream*, Princeton Press, 2017

## A new science: a word about the metrics

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- Well-being measurement - from a nascent collaboration between economists and psychologists to an entire new approach in the social sciences
- Can answer questions as diverse as the effects of commuting on well-being, why cigarette taxes make smokers happier, and why the unemployed are less unhappy with higher local unemployment rates
- Method well-suited for understanding situations where individuals do not have the *agency* to make choices and/or when consumption decisions are *not* the result of optimal choices, such as:
  - a) macro/institutional arrangements individuals cannot change (like inequality)
  - b) behaviors driven by imposed norms, addiction or self-control problems

## Terminology: From Bentham to Aristotle

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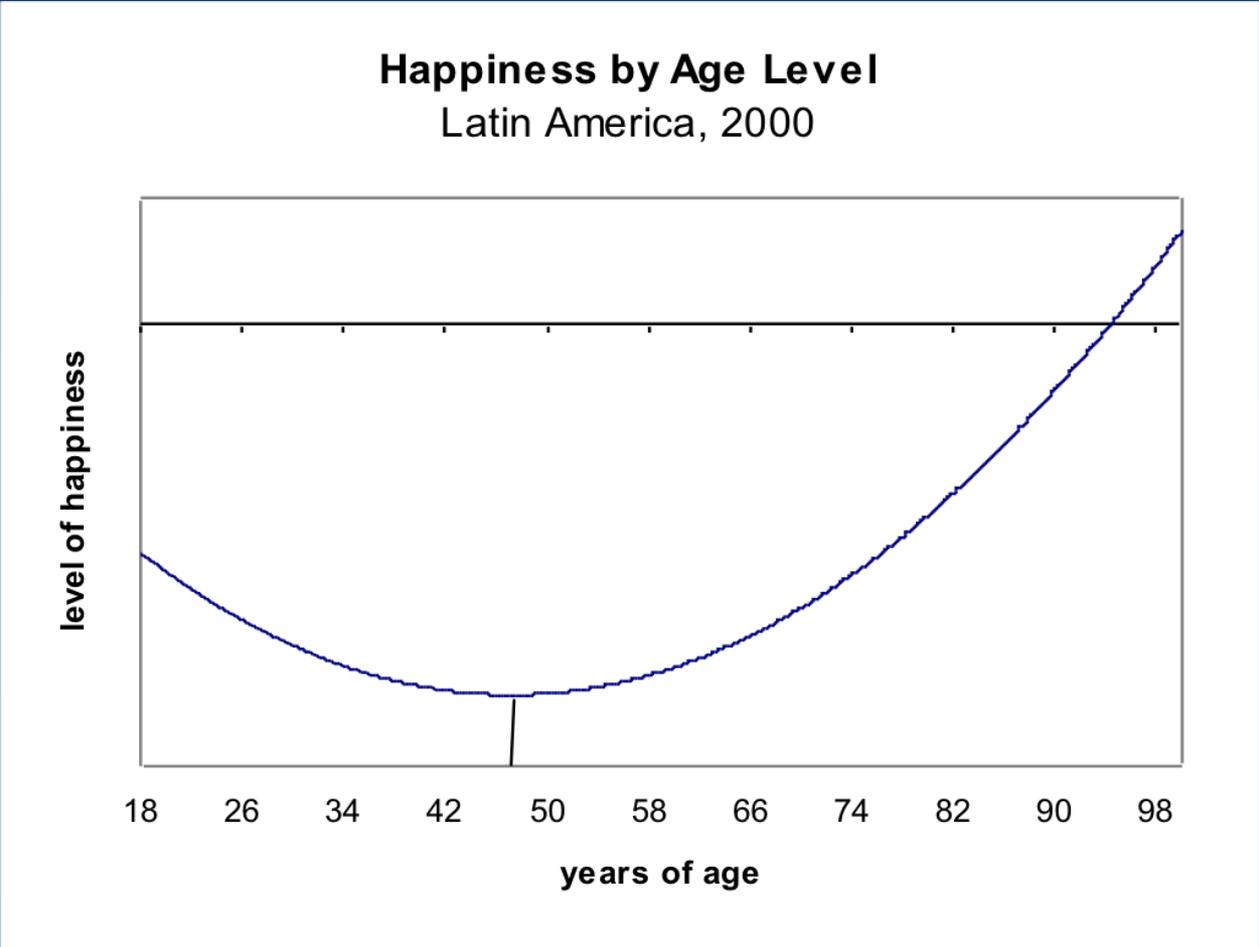
- “Happiness,” “well-being”, “subjective well-being”, and “life satisfaction” often used inter-changeably; yet important differences in meaning.
- **Happiness** attracts the most public attention; in the U.S. Declaration of Independence. Attempts to gauge how happy respondents feel about their lives; does not impose definition of happiness
- **Hedonic well-being** – measures how people *experience their daily lives* – their mood (positive or negative/smiling or worried yesterday) as they do different things, like commuting, spending time with friends, or working (Benthamite)
- **Life satisfaction (evaluative well-being)** – correlates more closely with income than general happiness; respondents evaluate their *life circumstances as a whole*
- **Eudemonic** metrics measure life purpose/fulfillment explicitly (Aristotelian)

## The method and the patterns

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- Econometric equations:  $W_{it} = \alpha + \beta x_{it} + \varepsilon_{it}$
- $W$  is the reported well-being of individual  $i$  at time  $t$ , and  $X$  is a vector of demographic and socio-economic characteristics. Unobserved traits are captured in the error term
- Remarkably consistent patterns in determinants of life satisfaction around the world ( e.g. income, age\*\*, health, employment, social relationships, marriage)
- Can then explore “happiness” effects of things that vary or change more, such as inflation and unemployment rates, *inequality*, environmental quality, or personal behaviors, such as smoking, exercising, and commuting time and much more
- Do not ask people if these things make them un/happy

# Consistent Patterns around the World - Happiness and Age!



## Daily Experience (Bentham) versus Life Fulfillment (Aristotle)

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- Individuals with more positive attitudes about future mobility are happier (and visa versa). Linked with more willingness to invest in the future and in better future outcomes (in the health, income, and social behavior arenas)
- Those with more limited future opportunities and lower levels of well-being have higher discount rates – less capacity to make investments in the future and less confidence they will pay off.
- Tend to focus on daily experience as they lack the capacity to plan ahead; life is stressful and driven by circumstances beyond control (“bad” stress); they may enjoy daily experiences but score much lower on life fulfillment questions
- Those with more capabilities and opportunities may focus more on the longer term dimensions of their lives even at the expense of daily quality of life (“good” stress)

## Attitudes about Inequality - Two Americas?

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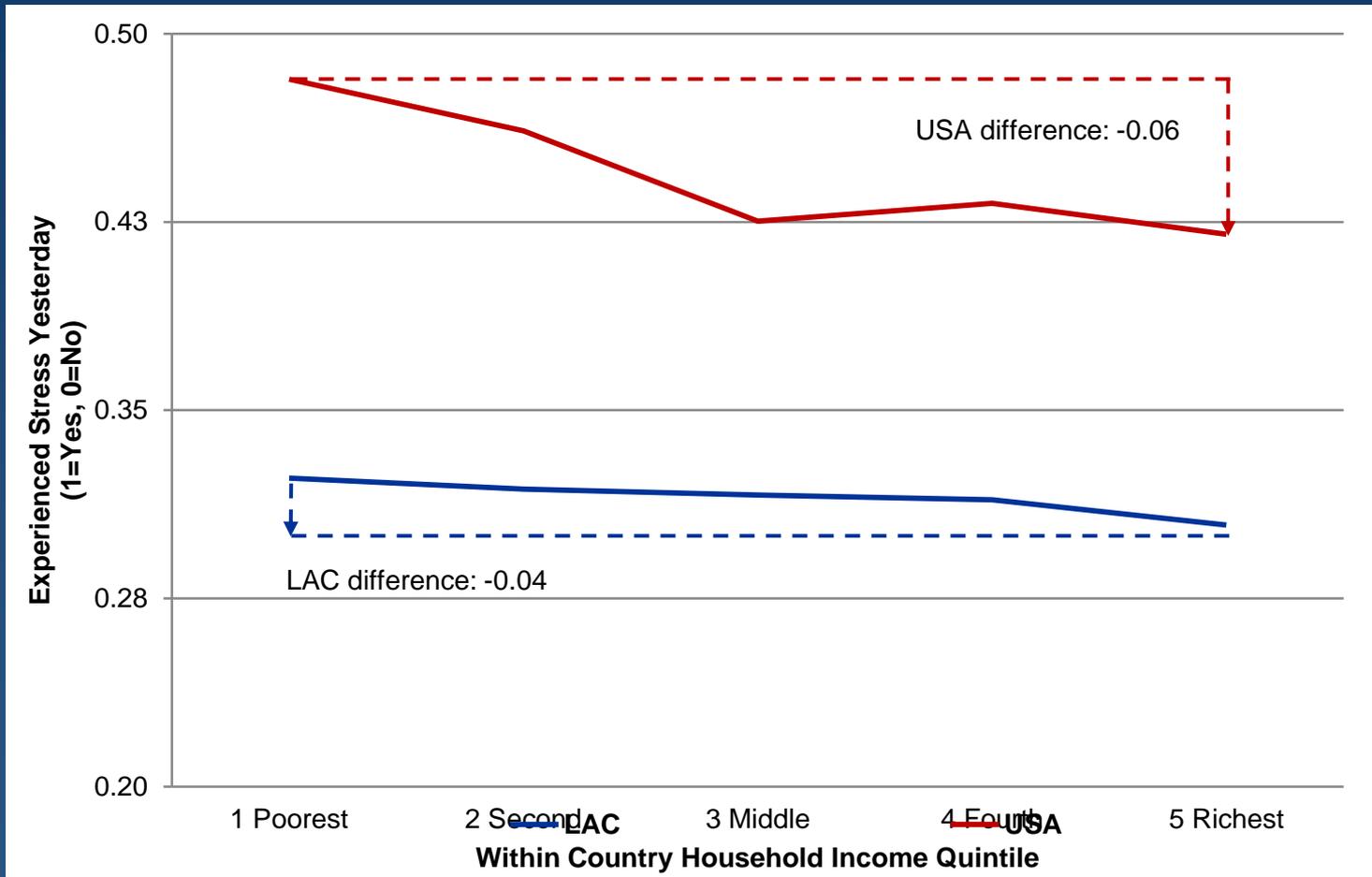
- Does U.S. exceptionalism/American Dream persist in spite of inequality trends? As late as 2001, Americans remarkably tolerant of inequality (Alesina et al)
- Now (2016), 62% of Americans think their children will be *worse off* than they are, only 33% think better – compares to many OECD, but in LAC, only 13% of Chileans, for example, think their children will be worse off than they are
- Leonhardt social media study - it depends where you are
  - » Common words in poor America are: guns, religion, hell, diabetes, video-games, and fad diets (living in the moment)
  - » Common words in rich America are: iPads, baby joggers, Baby Bjorns, and exotic travel destinations like Machu Picchu (investing in the future)

## Research in the book and in progress

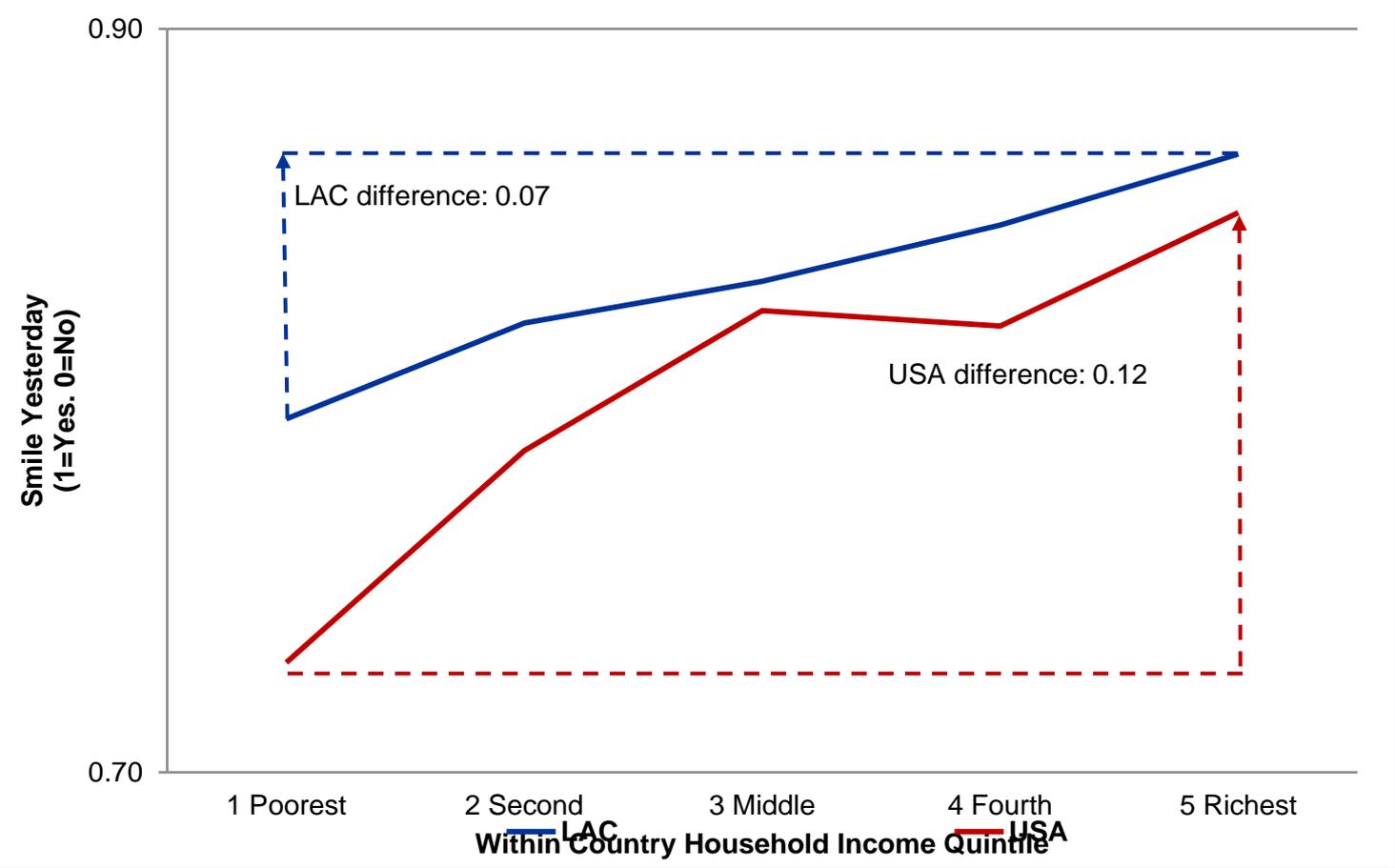
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- Data from Gallup Healthways Surveys (1000 Americans per day from January 2008-2013) and from Gallup World Poll (app 1000 people per country per year in 162 countries for 2005-2013).
- Extensive detail in both surveys on socio-demographics and income, attitudes, and well-being across both dimensions.
- Compare well-being metrics and attitudes about future mobility in the U.S. and Latin America, region long known for exceptionally high rates of inequality (although improvements in the past decade).
- Within the U.S. explore how trends in well-being - and ill-being - vary across socio-economic cohorts and across races and places.
- Most recent work matches our well/ill-being data with CDC data on increasing mortality rates (due to preventable causes) among some cohorts in the U.S.

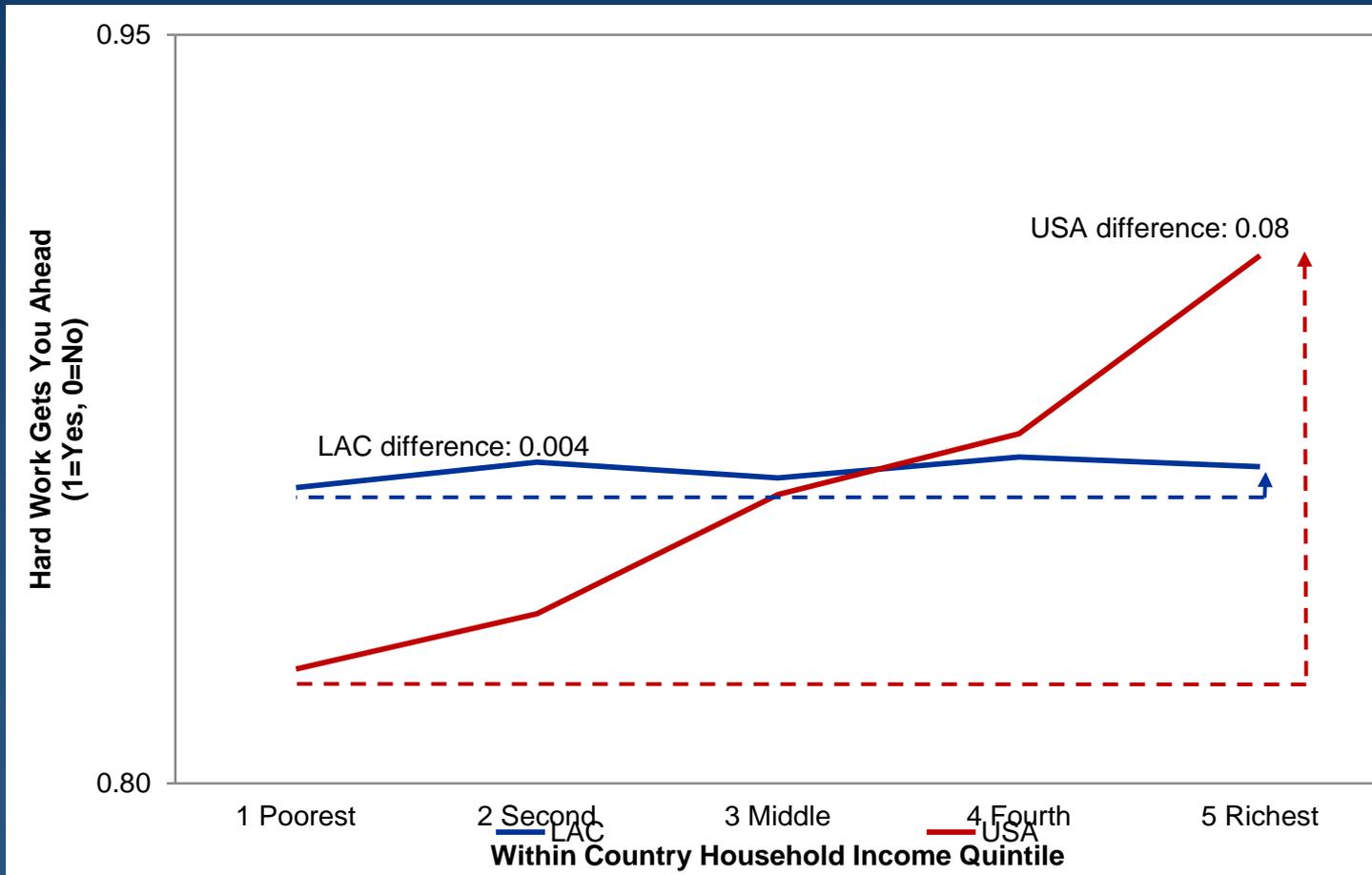
# Experienced Stress – USA vs LAC



# Smile Yesterday – USA vs LAC



# Belief in Hard Work – USA vs LAC



## Regression of Belief in Hard Work Attitudes – USA versus LAC

	Hard Work Gets You Ahead: 1=Yes, 0=No	
	USA	LAC
Age	-0.008 <sup>***</sup>	-0.003 <sup>***</sup>
Age squared/100	0.008 <sup>***</sup>	0.003 <sup>***</sup>
Gender: 1=Female, 0=Male	-0.036 <sup>***</sup>	0.016 <sup>***</sup>
Married: 1=Yes, 0=No	0.006	0.011 <sup>***</sup>
HS Education or beyond: 1=Yes, 0=No	-0.006	-0.026 <sup>***</sup>
Household Income (International \$), in logs	0.010 <sup>**</sup>	0.001
Best Possible Life (0-10)	0.025 <sup>***</sup>	0.007 <sup>***</sup>
Experienced Stress Yesterday: 1=Yes, 0=No	-0.019 <sup>**</sup>	-0.029 <sup>***</sup>
<i>Controls</i>		
Year dummy variables (Base: 2013)	Yes	Yes
Country dummy variables (Base: Argentina)	Not applicable	Yes
<i>Observations</i>	4,960	118,413
*** p<0.01, ** p<0.05, * p<0.1		

# Good stress or bad stress?

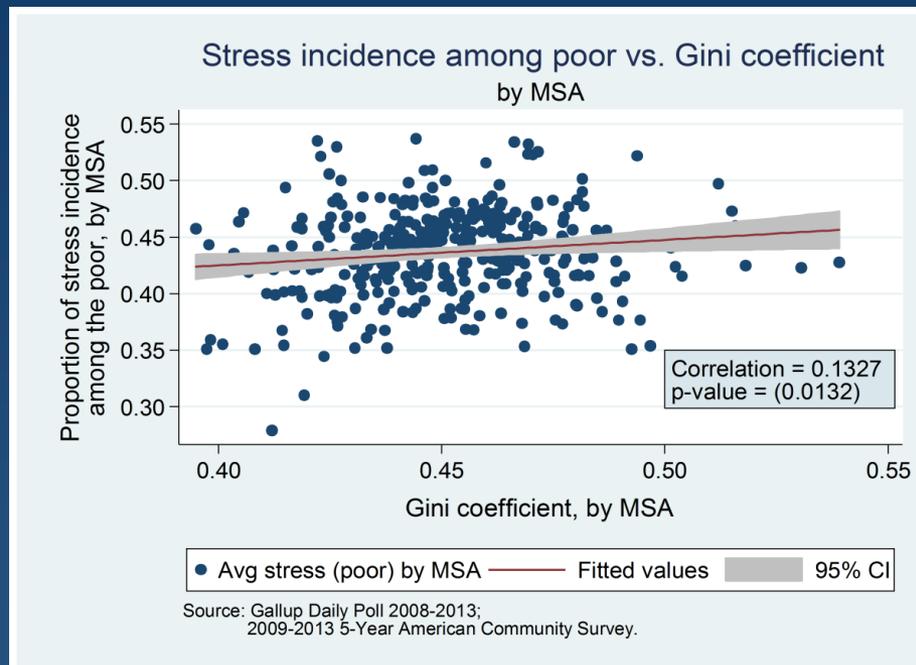
	Ordered Logit regressions			
	Dependent variable: Best Possible Life (0-10) scale			
	(1)	(2)	(3)	(4)
Age	-0.046*** [0.000]	-0.060*** [0.001]	-0.059*** [0.001]	-0.059*** [0.001]
Age Squared/100	0.046*** [0.000]	0.060*** [0.001]	0.059*** [0.001]	0.060*** [0.001]
Gender (1=Men, 0=Women)	-0.283*** [0.003]	-0.300*** [0.003]	-0.298*** [0.003]	-0.299*** [0.003]
Marital status: 1=Married/Living w/ partner 0=Other	0.487*** [0.003]	0.354*** [0.004]	0.357*** [0.004]	0.354*** [0.004]
Body Mass Index	-0.022*** [0.000]	-0.020*** [0.000]	-0.020*** [0.000]	-0.020*** [0.000]
Experienced stress yesterday 1=Y 0=N	-0.892*** [0.003]	-0.864*** [0.003]	-1.958*** [0.024]	-1.260*** [0.010]
Highest Education Level, 1<HS to 5=PGrad	0.164*** [0.001]	0.124*** [0.001]	0.126*** [0.001]	0.089*** [0.001]
Ln (Household Income)		0.278*** [0.002]	0.216*** [0.002]	0.277*** [0.002]
Interaction: Stress and Ln (Household Income)			0.132*** [0.003]	
Interaction: Stress and Education Level				0.095*** [0.002]
Observations	1,659,166	1,246,967	1,246,967	1,246,967
Year dummies	Yes	Yes	Yes	Yes

Standard errors in brackets

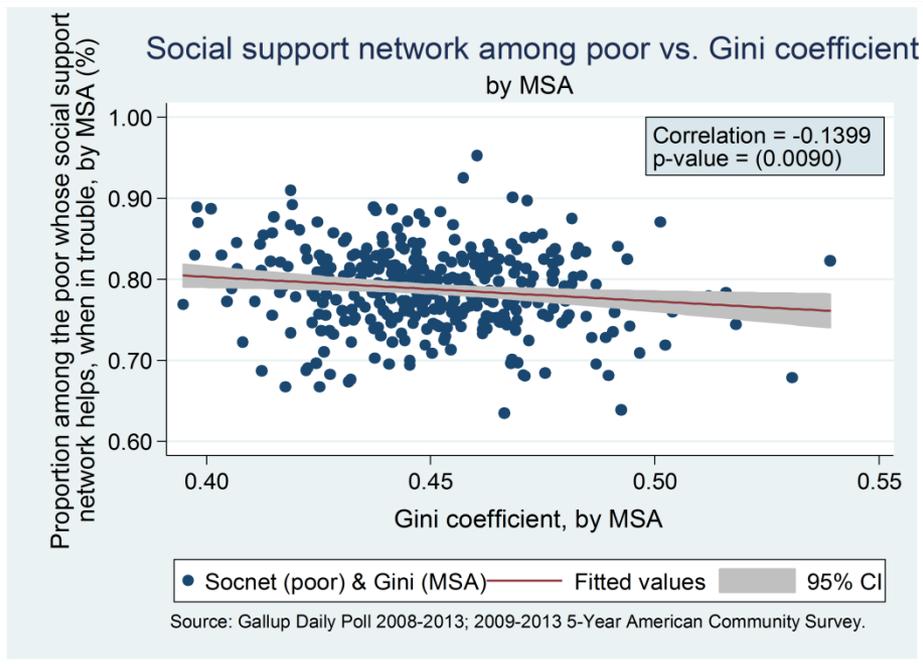
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Notes: Using Gallup Healthways Surveys 2008-2012. Household Income is in the group midpoint value, in natural logs.

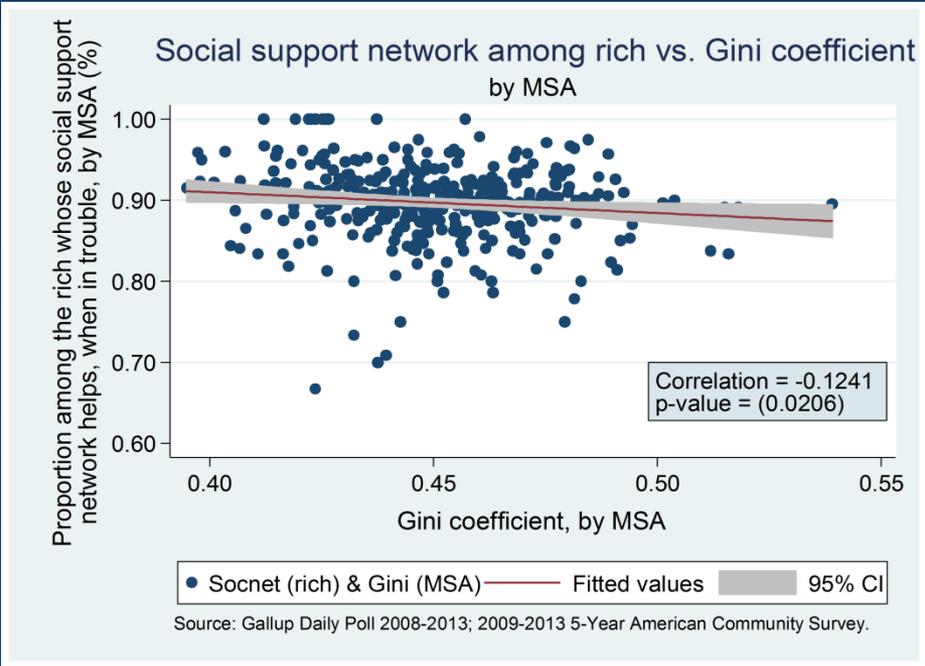
# The Gatsby Curve, Part I - Stress



# The Gatsby Curve Part II – Social Support



# Gatsby Curve, Social Support, Continued



# Exploring Race-Income Heterogeneities

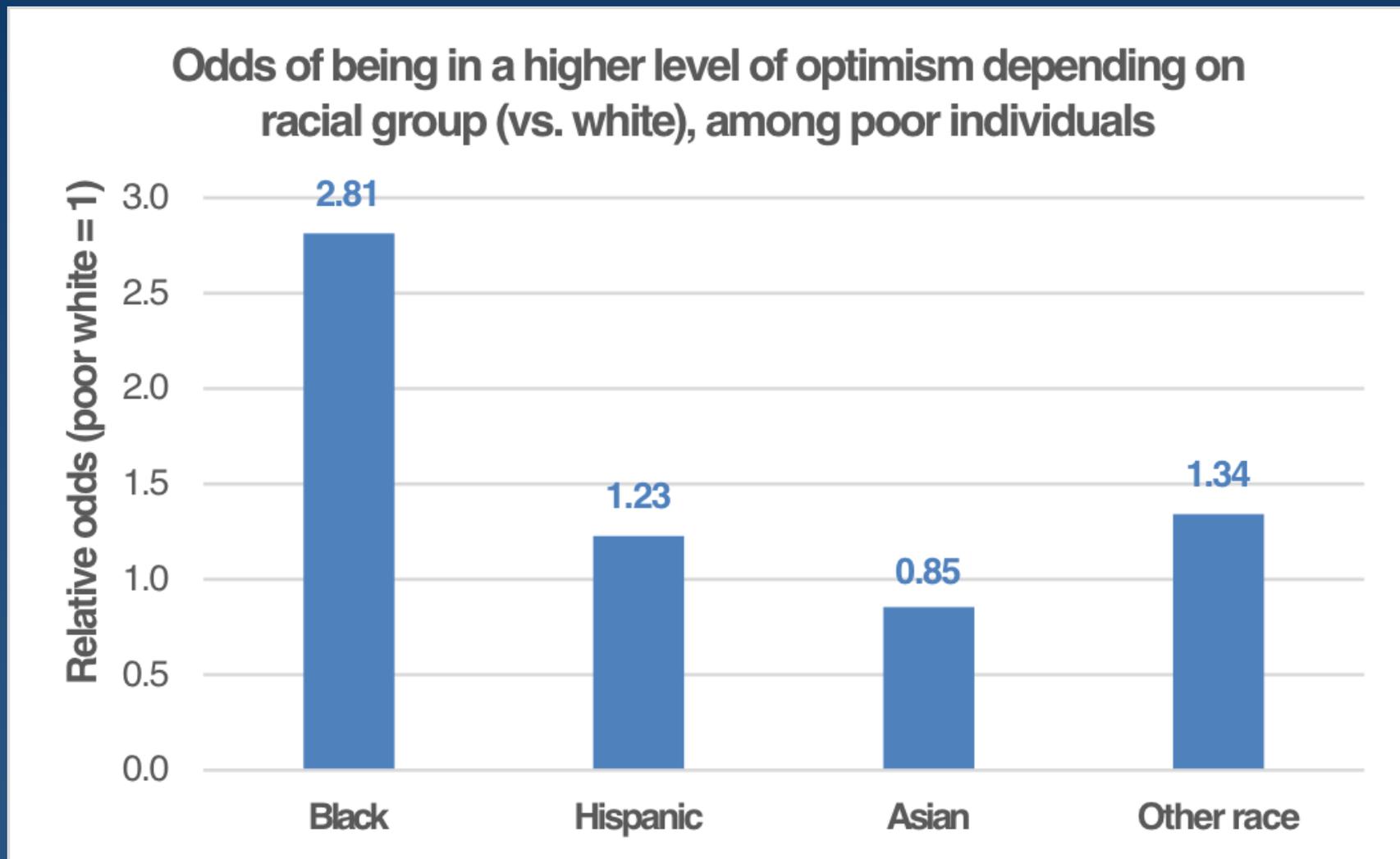
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- **Empirical specification**

$$WB_{ijt} = \beta_0 + \beta_1 * (poorhh_{ijt}) + \beta_2 * (richhh_{ijt}) + \beta_3 * (black_{ijt}) + \beta_4 * (hispanic_{ijt}) + \beta_5 * (asian_{ijt}) + \beta_6 * (other\ race_{ijt}) + \beta_7 * (poorhh_{ijt}) * (black_{ijt}) + \beta_8 * (poorhh_{ijt}) * (hispanic_{ijt}) + \beta_9 * (poorhh_{ijt}) * (asian_{ijt}) + \beta_{10} * (poorhh_{ijt}) * (other\ race_{ijt}) + \beta_{11} * (richhh_{ijt}) * (black_{ijt}) + \beta_{12} * (richhh_{ijt}) * (hispanic_{ijt}) + \beta_{13} * (richhh_{ijt}) * (asian_{ijt}) + \beta_{14} * (richhh_{ijt}) * (other\ race_{ijt}) + \beta_{15} * (Z_{ijt}) + (MSA\ dummies_j) + (year\ dummies_t) + \varepsilon_{ijt}$$

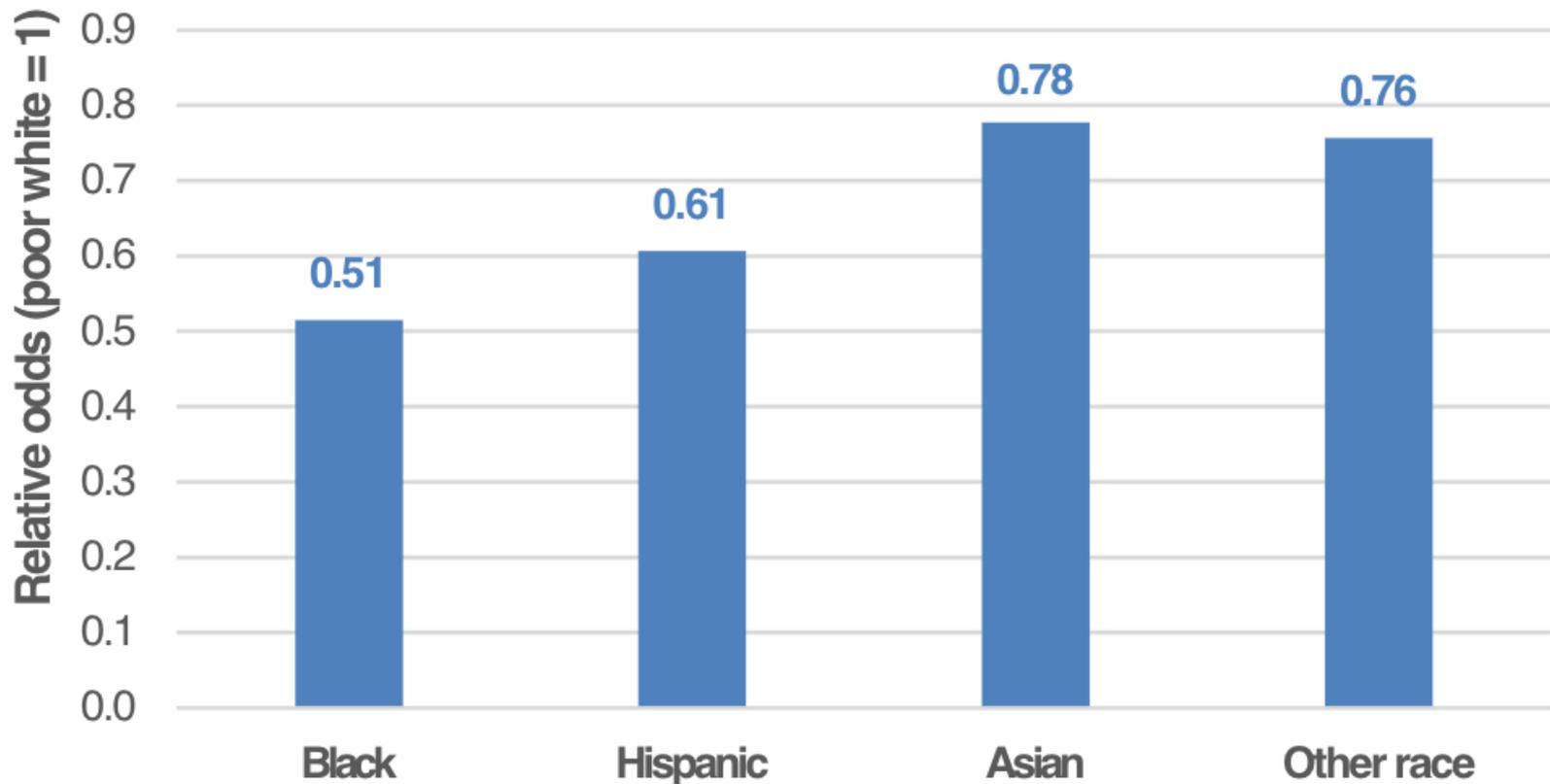
- **WB:** particular well or ill-being marker for individual *i*, in MSA *j*, for time *t*: (i) Reported life satisfaction today, (ii) Expected life satisfaction in 5 years (proxy for optimism), (iii) Experienced stress yesterday, (iv) Worry yesterday, (v) Satisfied with city of residence (vi) Has a social support network that can be relied on in times of need
- **Z:** vector of socio-demographic controls, include: dummy variables for age groups, BMI-based categories (underweight, normal range, overweight, obese), gender, educational, employment status, experiencing pain the previous day, self reported health problems, marital status; religious preference, lack of money for food/healthcare (in past 12 months)
- Additional specifications: composite measure from CDC including suicides, liver disease, accidental poisoning, and indeterminate deaths, and aggregating it up to the MSA level

## More to the Story – Racial Differences: Poor Blacks Optimistic about the Future, Poor Whites Desperate



## And stress patterns similar

Odds of experiencing stress, depending on racial group (vs. white), among poor individuals



## Deaths of Despair: Differences across Race and Place

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- **Individual level:** MSA level composite death rate for 35-64 year olds *negatively* correlated with life satisfaction/future life satisfaction and *positively* correlated with stress and worry (two way causality?)
- **Average level MSA trends:** focus on role of place and health behaviors
- Percent of smokers per MSA is negatively correlated with life satisfaction and positively correlated with stress; percentage of respondents who exercise is positively correlated with current and future life satisfaction and negatively correlated with stress (go runners!);
- Racial diversity as a characteristic of place: the share of blacks is positively correlated with future life satisfaction/optimism and negatively with stress
- Places with these same traits more economically vibrant, lower mortality rates

## Tentative Conclusions

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- Individuals with higher levels of well-being have better future outcomes, due to intrinsic motivation and/or capacity to have longer time horizons or both
- Two Americas:
  - » Wealthy: high levels of life satisfaction and ability to plan for/invest in the future.
  - » Poor: low life satisfaction, high levels of stress/other markers of ill-being; optimism among blacks/Hispanics contrasts with desperation/rising deaths of poor whites
- *Cities*/racially diverse places , more hopeful, more likely to have lower mortality rates
- Why the desperation? Decline of white working class - structural trends in the world economy: “jobless” tech driven growth; more competition for low-skilled jobs; also present in Europe – increasing support for political extremists, populists, Brexit, and then Trump.
- Some causes unique to U.S., such as exceptionally high inequality, weak public education, and very limited welfare support (which stigmatizes the poor); some things we do not fully understand yet, such as differential resilience levels across races (lower suicide, more willingness to do other jobs)
- Regular tracking of well-being trends (as in the UK), could prevent being caught off guard with rise in mortality; metrics could serve as leading indicators in the future

# Race\*Income + Controls + MSA-level data + Mortality rates

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	Ord Logit: bpl Full set of controls (172 MSAs)	Ord Logit: bpla Full set of controls (172 MSAs)	Ord Logit: bpla Full set of controls + bpl control (172 MSAs)	Logit: worry Full set of controls (172 MSAs)	Logit: stress Full set of controls (172 MSAs)	Logit: citysat Full set of controls (172 MSAs)
Reported life satisfaction today (0-10)			0.702*** (0.0084)			
Log(Gini Index)	0.010 (0.2827)	0.256 (0.2874)	0.219 (0.2558)	-0.022 (0.3620)	-0.243 (0.3410)	-0.548 (0.5050)
Log(mean MSA hh income)	-0.134 (0.2217)	0.248 (0.2107)	0.316 (0.2033)	0.448 (0.2777)	0.313 (0.2534)	-0.045 (0.3806)
Log(MSA composite death rate per 100,000 people, 45-54 years old)	-0.014 (0.0217)	-0.036** (0.0182)	-0.033* (0.0189)	0.017 (0.0332)	0.030 (0.0233)	0.050 (0.0373)
Poor household	-0.328*** (0.0113)	-0.134*** (0.0107)	0.056*** (0.0113)	0.137*** (0.0136)	0.077*** (0.0131)	-0.156*** (0.0182)
Rich household	0.438*** (0.0077)	0.261*** (0.0080)	0.051*** (0.0082)	-0.035*** (0.0128)	0.072*** (0.0112)	0.222*** (0.0199)
Black	0.177*** (0.0141)	0.801*** (0.0197)	0.832*** (0.0188)	-0.460*** (0.0214)	-0.634*** (0.0211)	-0.387*** (0.0466)
Hispanic	0.275*** (0.0157)	0.360*** (0.0187)	0.263*** (0.0230)	-0.115*** (0.0248)	-0.392*** (0.0203)	0.024 (0.0370)
Asian	-0.085*** (0.0210)	-0.155*** (0.0341)	-0.117*** (0.0311)	-0.013 (0.0355)	-0.251*** (0.0247)	0.100** (0.0412)
Other race	0.132*** (0.0259)	0.304*** (0.0249)	0.272*** (0.0275)	-0.101*** (0.0309)	-0.278*** (0.0315)	-0.215*** (0.0446)
(Rich household)*(Black)	-0.212*** (0.0306)	-0.212*** (0.0346)	-0.125*** (0.0340)	0.002 (0.0479)	0.020 (0.0399)	-0.010 (0.0514)
(Rich household)*(Hispanic)	-0.131*** (0.0302)	-0.092*** (0.0301)	-0.017 (0.0346)	0.161*** (0.0454)	0.201*** (0.0365)	-0.018 (0.0677)
(Rich household)*(Asian)	-0.122*** (0.0412)	-0.058 (0.0433)	-0.004 (0.0373)	-0.031 (0.0516)	0.049 (0.0402)	0.036 (0.0623)
(Rich household)*(Other race)	-0.077 (0.0483)	-0.110** (0.0491)	-0.068 (0.0495)	0.086 (0.0786)	0.082 (0.0690)	-0.122 (0.0997)
(Poor household)*(Black)	0.405*** (0.0267)	0.242*** (0.0248)	0.043* (0.0257)	-0.018 (0.0323)	-0.030 (0.0234)	-0.022 (0.0357)
(Poor household)*(Hispanic)	0.299*** (0.0211)	-0.184*** (0.0258)	-0.393*** (0.0304)	0.013 (0.0262)	-0.099*** (0.0290)	0.149*** (0.0371)
(Poor household)*(Asian)	0.223*** (0.0428)	0.051 (0.0437)	-0.077* (0.0452)	0.050 (0.0575)	0.072 (0.0609)	-0.128* (0.0722)
(Poor household)*(Other race)	0.178*** (0.0580)	0.035 (0.0572)	-0.053 (0.0573)	0.003 (0.0542)	0.022 (0.0549)	-0.040 (0.0685)
Observations	647,369	647,369	647,369	647,369	647,369	647,369
MSA dummies	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes

Clustered standard errors (at MSA-level) in parentheses.

\*\*\* p<0.01; \*\* p<0.05; \* p<0.1

These regressions include the 172 MSAs for which sampling weights were available at least in one year. Controls for age, education, gender, marital status, employment situation, religious preference, BMI-based categories, self-reported health problems, pain, smoking, exercising, lacking money for food, and lacking money for healthcare included, but not displayed.

# MSA-level trends: The Role of Place, Race, and Health Behaviors

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	
	FE: bpl	FE: bpl	FE: bpl	FE: bpl	FE: bpl	FE: bpl	FE: bpla	FE: bpla	FE: bpla	FE: bpla	FE: bpla	FE: bpla	FE: stress	FE: stress	FE: stress	FE: stress	FE: stress	FE: stress	
Log(Gini Index)	-0.486 (0.5271)				-0.431 (0.4883)	-0.584 (0.4693)	-0.079 (0.6132)				-0.187 (0.5994)	-0.353 (0.5734)	0.011 (11.1417)				1.951 (11.0680)	7.283 (10.7975)	
Log(mean MSA hh income)	0.224 (0.3185)				0.078 (0.3187)	0.130 (0.3163)	0.278 (0.4080)				0.259 (0.3817)	0.315 (0.3767)	8.532 (7.5763)				9.513 (7.5903)	7.723 (7.1608)	
Log(MSA composite death rate per 100,000 people, 45-54 years old)		-0.047 (0.0324)			-0.043 (0.0330)	-0.046 (0.0319)		-0.085** (0.0347)			-0.073* (0.0368)	-0.076** (0.0361)		0.554 (0.5799)			0.715 (0.6409)	0.805 (0.6449)	
Share reporting physical pain (0-100%)						-0.008*** (0.0028)						-0.008** (0.0034)						0.273*** (0.0559)	
Share of Blacks (0-100%)			0.000 (0.0020)		0.001 (0.0019)	0.001 (0.0019)			0.006*** (0.0019)		0.006*** (0.0018)	0.007*** (0.0019)			-0.126*** (0.0302)		-0.141*** (0.0305)	-0.146*** (0.0305)	
Share of Hispanics (0-100%)			0.002 (0.0038)		0.002 (0.0038)	0.002 (0.0036)			0.002 (0.0035)		0.001 (0.0035)	0.001 (0.0033)			-0.111 (0.0988)		-0.126 (0.0985)	-0.139 (0.0946)	
Share of Asians (0-100%)			-0.009 (0.0072)		-0.010 (0.0072)	-0.010 (0.0078)			0.003 (0.0040)		0.003 (0.0043)	0.003 (0.0043)			-0.081 (0.1140)		-0.068 (0.1197)	-0.062 (0.1316)	
Share of Other races (0-100%)			-0.007 (0.0050)		-0.005 (0.0054)	-0.003 (0.0051)			-0.002 (0.0041)		-0.001 (0.0044)	0.001 (0.0041)			0.111 (0.1335)		0.059 (0.1336)	-0.018 (0.1294)	
Share of individuals who smoke (0-100%)				-0.007** (0.0026)	-0.006** (0.0027)	-0.006** (0.0026)				0.002 (0.0035)	0.002 (0.0035)	0.002 (0.0034)					0.175** (0.0679)	0.171** (0.0689)	0.155** (0.0681)
Share of individuals who exercised at least once in last 7 days (0-100%)				0.008** (0.0030)	0.007** (0.0029)	0.007** (0.0029)				0.006** (0.0028)	0.006** (0.0028)	0.006** (0.0028)					-0.106* (0.0618)	-0.096 (0.0626)	-0.103* (0.0596)
Share of normal BMI individuals (0-100%)				-0.011 (0.0097)	-0.008 (0.0096)	-0.011 (0.0098)				-0.018* (0.0093)	-0.016 (0.0099)	-0.018* (0.0105)					-0.241 (0.2476)	-0.338 (0.2608)	-0.258 (0.2380)
Share of overweight individuals (0-100%)				-0.009 (0.0103)	-0.007 (0.0104)	-0.009 (0.0103)				-0.017** (0.0080)	-0.015* (0.0087)	-0.017* (0.0092)					-0.255 (0.2286)	-0.331 (0.2424)	-0.255 (0.2264)
Share of obese individuals (0-100%)				-0.008 (0.0104)	-0.006 (0.0100)	-0.007 (0.0101)				-0.018** (0.0085)	-0.016* (0.0090)	-0.018* (0.0097)					-0.217 (0.2298)	-0.295 (0.2451)	-0.243 (0.2245)
Constant	6.227** (2.9433)	7.020*** (0.1000)	6.890*** (0.0685)	7.365*** (1.0916)	8.102** (3.3598)	8.466** (3.4145)	5.021 (3.6161)	8.076*** (0.1076)	7.748*** (0.0540)	9.049*** (0.9038)	6.881* (3.5331)	7.276** (3.5532)	-52.131 (74.9226)	41.165*** (1.8261)	44.793*** (1.6884)	69.978*** (23.5695)	-35.500 (81.7140)	-48.180 (78.6570)	
Observations	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460
R-squared	0.114	0.118	0.132	0.156	0.180	0.201	0.232	0.249	0.250	0.258	0.290	0.309	0.038	0.035	0.069	0.074	0.119	0.169	
Number of msacode	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92
MSA dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Note: Includes only the 92 MSAs for which both MSA weights and composite death rates were available for every year in the 2010-14 period.