The role of despair in the opioid crisis

Lessons from the science of well-being

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BROOKINGS

The role of despair in the opioid crisis: Lessons from the science of well-being

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THE OPIOID CRISIS IN AMERICA
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Executive Summary

Deaths of despair—suicides, drug overdose, and alcohol-related deaths—claimed the lives of over 1 million Americans between 2006-2015. Some cohorts, particularly less than college educated whites, have lost faith in the American Dream, have little hope for the future, and low levels of resilience and coping skills. This is the population that is most vulnerable to opioid overdose and other deaths of despair, while minorities, who still face objective disadvantages and discrimination, are much more hopeful and resilient.

In this paper, I first explore the new metrics for understanding and addressing the role of despair in the opioid crisis. There is now established best practice for implementing well-being surveys, with consensus on the importance of measuring *three distinct dimensions of well-being*: hedonic, evaluative, and eudaimonic.

I then show how well-being metrics track with America's divisions, exploring the extent to which trends in well-being and ill-being match those of the deaths of despair, at the level of individuals, race, and place. Geographically, these trends reflect two Americas, with one group displaying resilience and optimism about the future, and the other high levels of despair and poor objective health indicators.

In response to this complex crisis, federal policymakers have focused on saving addicts from overdose deaths by increasing the supply of "opioid antagonist" medications. What is missing is an approach that addresses the epidemic's root causes by dealing with both demand and supply issues. I review some examples of local level interventions that have been successful and provide generalizable lessons. For such interventions to be effective over the long run, they must help address the underlying causes of despair, such as lack of employment, sense of purpose, and hope for the future. This is an instance where we have much to learn from the informal safety nets and community support common in African American and Hispanic communities.

In conclusion, I propose ideas for new and expanded federal level efforts, including providing collective evidence to policymakers, providing federal funds to support efforts to enhance well-being, and building well-being metrics into national statistics collection.

Introduction

Over 1 million Americans died from suicide, drug, or alcohol related deaths from 2006-2015, the so-called "deaths of despair." Policy for opioid and related addictions, at least at the federal level, has focused on saving addicts from overdose death by extending the supply of "opioid antagonist" medications to first responders and relevant medical personnel. What has been missing is an approach that addresses the epidemic's root causes by dealing with *both* demand and supply.

We are the only wealthy country in the world where mortality rates are climbing and are in a social as well as a health crisis.[1] The mortality trend is driven by "deaths of despair"—suicides, drug overdose, and alcohol related deaths—among less than college-educated whites in their middle-aged years. In contrast, blacks and Hispanics, who began with lower levels of life expectancy and face greater disadvantages, have been making gradual progress in narrowing those gaps and are hardly represented in this category of deaths.

The numbers are daunting. This category of deaths took 127,500 individuals in 2015 alone (*Pain in the Nation*, 2017). According to the Centers for Disease Control and Prevention's latest data, overdose deaths finally tapered in 2018, but there were still 68,000 deaths (Goodnough et al., 2019). The U.S. boasts more opioids per capita than any other country in the world, and more people report to have experienced pain the previous day than respondents in 30 other countries around the world, many of them less wealthy than the U.S. (Blanchflower and Oswald, 2019).

Deaths of despair are most prevalent in the American heartland, in places where manufacturing and other blue-collar jobs have disappeared, and where the communities that formerly supported these industries are experiencing high associated social costs (Case and Deaton, 2015). The loss of purposeful employment—and hope more generally—is an important part of the explanation of trends in both addiction and mortality. Sergio Pinto and I (2018) find that a close match between the reported ill-being—low levels of hope for the future and high levels of worry—of the same cohorts who are most likely to die prematurely of these deaths, as well as in the places where they live.

New metrics for understanding and addressing the role of despair in the crisis

There is now established best practice for implementing well-being surveys, with consensus on the importance of measuring *three distinct dimensions of well-being*: hedonic, evaluative, and eudaimonic. Each of these reveal different elements of quality of life and well-being, ranging from daily moods to life course evaluations to purposefulness (Stone and Mackie, 2013).

Hedonic metrics capture individuals' affective states and their role in daily living. The metrics build from daily recall questions, which ask respondents if they experienced enjoyment, stress, or anger frequently the day before. They are good for evaluating daily quality of life, such as the short-term effects of various health conditions and/or activities such as volunteering.

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1 Some new data for Scotland suggests similar patterns, although not on the same scale. Some of these are due to similar labor force related trends, some are prevalent among pre-existing heroin addicts.

Evaluative metrics capture individuals' satisfaction with their lives as a whole. They are the most commonly used and are best suited to assessing life-course well-being, which includes respondents' ability to choose the kinds of lives they want to lead. Eudaimonic metrics explicitly ask whether individuals have purpose or meaning in their lives.

A newer dimension, which we have pioneered in our recent work is that of hope for the future. While less common in the literature, we find that it is the well-being dimension that is most closely correlated with future outcomes, such as longevity, and that correlates most closely with the propensity to addiction and deaths of despair (O'Connor and Graham, 2019; Graham and Pinto, 2018). There is likely two-way causality between lack of hope and addiction. Yet our research on longevity shows that optimism among less than college educated white males began to decline in the late 1970s, well before the increases in addiction and premature death.

Surveys do not ask respondents if things (such as income) or activities (such as smoking or exercising) make them happy or stressed. Surveys begin with respondents' reported well-being along the dimensions noted above, and then collect extensive information on respondents' socio-economic and demographic traits. Respondents are not aware that we are linking the latter set of questions with their well-being reports, avoiding the biases that come from focusing an individual's attention on a specific domain of life.

We analyze the data via econometric equations taking the following form:

$$W_{it} = \alpha + \beta x_{it} + \varepsilon_{it}$$

in which W_{it} is the reported well-being (in a specific dimension) of individual i at time t, and βx_{it} is a vector of individual traits such as age, income, gender, employment and marital status, objective or reported health, and area of residence. The epsilon captures innate individual traits that we are unable to observe but that matter to well-being.

The standard correlates of life satisfaction are remarkably consistent around the world. Income, for example, clearly plays a role, albeit with decreasing marginal returns. While more and more income does not result in commensurate increases in life satisfaction. Yet on average individuals with more income are more likely to score higher on life satisfaction questions. This is in part because being destitute is bad for all well-being dimensions of well-being, but also because those with more means have more capacity to choose the kinds of lives they want to lead and thus tend to be more satisfied with those lives. Yet health—controlling for income—matters as much if not more than income, and other factors such as being employed, having freedom, and having friends and a spouse or partner are also highly significant (Graham, 2009; Graham, Laffan, and Pinto, 2018).

Given the consistency of these general variables, we then can explore the well-being associations of variables that vary, such as commuting time, smoking, and other health behaviors, as well as macro and institutional arrangements such as inflation and unemployment, inequality, and governance. An important caveat is that most studies identify strong associations. Yet we can only infer causality in those that use over-time data for the same respondents or experiments that rely on exogenous interventions and compare well-being before and after. Otherwise, there is often two-way causality; happier people are more likely to marry each other and to make friends for example, as well as to derive benefits from those relationships.

A remarkably consistent finding, meanwhile, which holds in most countries in the world, is a U shape relationship between happiness and age, with the lowest point being in the middle-aged years (roughly from ages 40 to 50). Stress and other markers of ill-being, such as anti-depressant use, display an inverse U at roughly the same ages in many of the same countries.

This is explained by the many burdens in the middle-aged years, which often include both dependent children and aging parents, as well as by aspirations aligning with reality as most individuals reach the middle-aged years. Psychologists also note the role of emotional wisdom increasing—and the decrease in emotional swings—as individuals age (Blanchflower and Oswald, 2008; Graham and Ruiz-Pozuelo, 2017; Rauch, 2018).

An important additional factor in this pattern is selection bias. Happier people live longer, and therefore those who survive longer are more likely to be happy. Most relevant to this paper is that significant sectors of U.S. society are not surviving beyond the low point in the U due to preventable deaths due to suicide, opioids, and other drug or alcohol related deaths. Yet there are other sectors of society—poor and wealthy minorities and wealthy whites (compared to poor whites) who are much more likely to survive past the U and are continuing to see increases in life expectancy. This is, indeed, a marker of a very divided America.

Well-being metrics track with America's divisions

America's divisions were clear well before the deaths of despair became clear to the public. Not only has our income inequality been increasing for several decades, but so has inequality of opportunity, which has reversed the country's reputation as a land of opportunity despite its high levels of income inequality (for an overview of the literature on this, see Graham, 2017). As a result, our data on hopes and attitudes reflect two increasingly separate Americas—one group with future opportunity and future oriented behaviors, and another living at the moment, with precarious and insecure lives and jobs.

A few years ago, I began to explore how or if these trends were reflected in our well-being metrics. I first compared a range of well-being metrics (life satisfaction, smiling, stress, and belief in hard work) across Americans and Latin Americans. The gaps between the rich and the poor in the U.S. on all of these markers were significantly greater than they were for Latin Americans. Figure 1 shows that not only do Americans experience significantly more stress on a daily basis than Latin Americans, but the gaps in the levels of stress across the rich and poor are almost twice as great for Americans.

Figure 1. Experienced stress—USA vs LAC
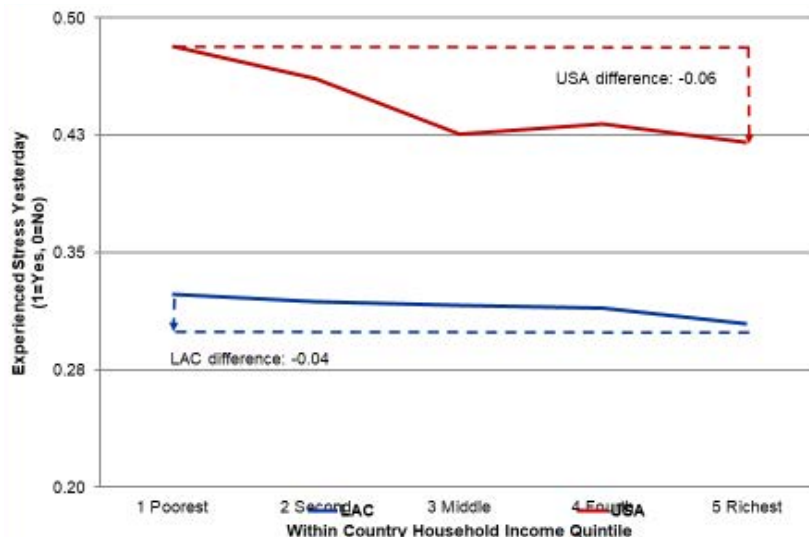
Even more remarkable, responses to a question which asks "if an individual works hard in this country, she or he can get ahead" were even more divided across the rich and poor in the U.S. than in Latin America, even though this is a classic "American dream" question. Indeed, the gaps across the responses of the rich and poor to this question in the U.S. was twenty times greater than for Latin America, where income was not a significant predictor of responses.

Figure 2. Belief in hard work—USA vs LAC
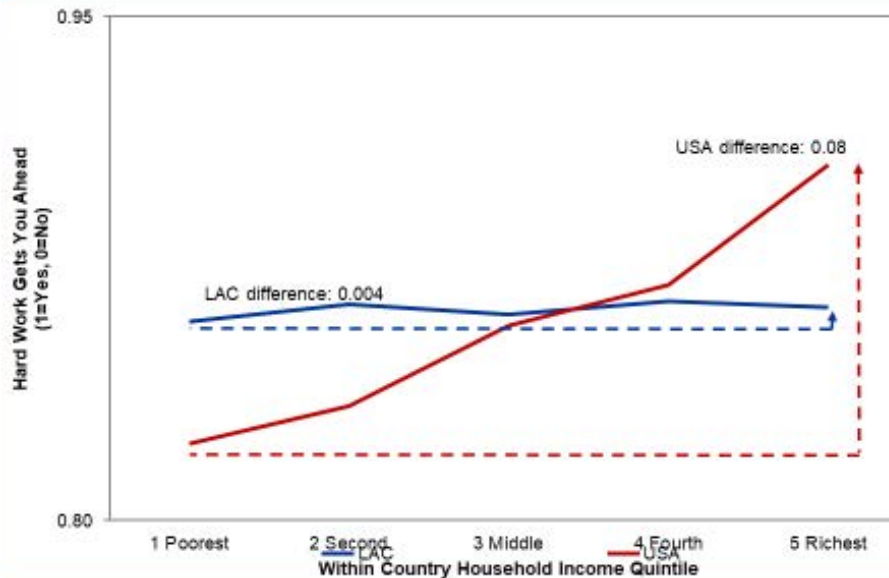
Given the rather stark trends that I found and in search of better understanding the trends, I looked at trends in optimism for the future across poor cohorts of different races in the United States. This was before the deaths of despair data were released, and at a time that the African American community was troubled due to police violence, as evidenced by riots in Ferguson and Baltimore, among other places. My findings were quite surprising. Poor Blacks were three times as likely to be higher up on an 11-point optimism ladder (0-10 scale) than were poor whites, and poor Hispanics were one and quarter times more likely to be optimistic (Figure 3). The latter was less surprising as Hispanics (and Latin Americans more generally) typically score relatively high on many markers of well-being.

Poor Blacks were also half as likely to report stress the previous day than were poor whites, and Hispanics about a third as likely (Figure 4). Objectively, it is very unlikely that poor minorities experience less stress than do poor whites. Instead, my further research and that of others suggest a resilience story, with roots in overcoming historic disadvantage and discrimination (Cherlin, 2019; Isenberg, 2016).

Figure 3. Racial differences: Poor Blacks and Hispanics optimistic about the future, poor whites desperate

Odds of being in a higher level of optimism depending on racial group (vs. white), among poor individuals
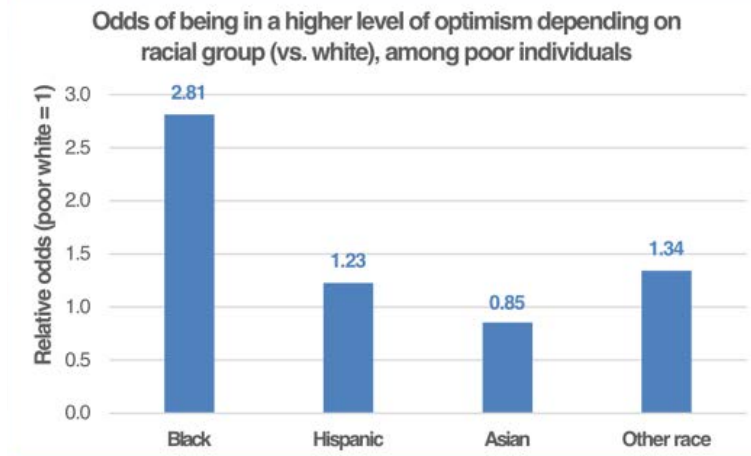
Figure 4. Stress patterns similar among racial groups

Odds of experiencing stress, depending on racial group (vs. white), among poor individuals
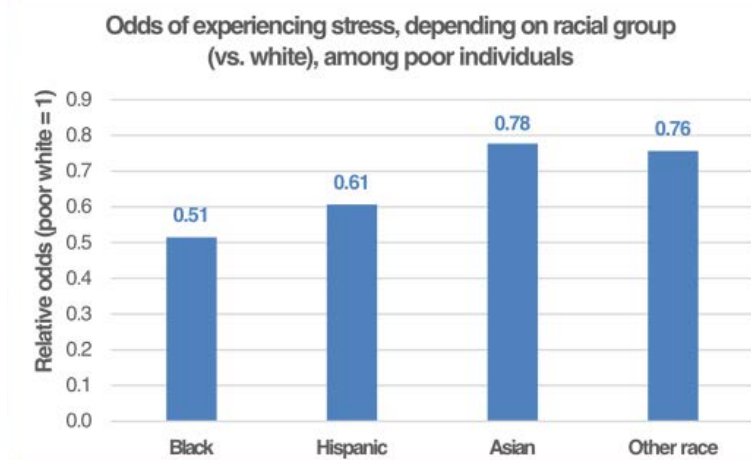
About six months after my findings came out, the Case and Deaton (2015) study came out, showing not only the increase in premature mortality increase in the U.S., but also its concentration among U.S. whites rather than in Hispanics or Blacks (Figure 5). At that point, Sergio Pinto and I began to explore the extent to which our trends in well-being and ill-being matched those of the deaths of despair, at the level of individuals, race, and place.

Figure 5. Mortality is rising in the United States

All cause-mortality ages 45-54 for U.S. non-Hispanic whites (USW), U.S. Hispanics (USH), and six comparison countries
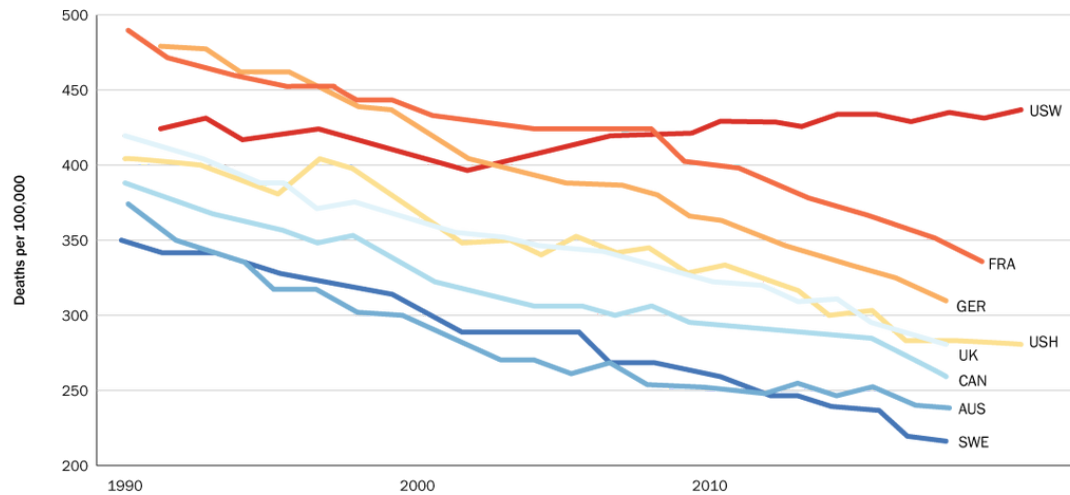
Source: Case and Deaton (2015).

We found remarkably consistent matches between trends in hope for the future—or lack there-of, and in reported stress and worry, and those in deaths of despair. Individuals who were more likely to be in the deaths of despair category (less than college educated whites) consistently displayed far less hope for the future and more stress and worry than minorities, and at the same time were more likely to live in a county or metropolitan statistical area with higher levels of these deaths. While we cannot establish causality, we posit that it likely runs in two directions. Those with high levels of despair and stress and worry are more likely to be vulnerable to opioid and other forms of addiction and the associated deaths, while at the same time, living in a place with high levels of these deaths could contribute to the despair underlying them (Graham and Pinto, 2018).

The geography of desperation

Since the 1970s, the decline in manufacturing has hit specific regions and communities much more than others. Mortality, for example, is higher in places with industries where Chinese competition increased most intensely (Pierce and Schott, 2016). More generally, it reflects an increasing trend of automation replacing low-skill jobs. The same communities that saw pronounced declines in employment also experienced decreases in marriage rates, increases in the percentage of prime aged-males out of the labor market, reliance on disability, and the per capita consumption of opioids (Krueger, 2017). The latter two trends relate in part to the toll that manufacturing and mining jobs take on workers' health. Related to this, while union jobs—which are fast disappearing—tended to come with stable health insurance, reliance on disability insurance for health care creates perverse incentives as re-entering the labor force requires forgoing disability benefits. Higher levels of reported pain and related opioid use are also due to strategic supply strategies, first by the pharmaceutical industry and subsequently by drug traffickers, who followed the market. The outcome was literally a perfect storm.

There were some modest changes in demographic and locational patterns in 2018, with the trends in most heartland states holding steady and even declining in some instances. At the same time, overdoses continued to rise in some mid-Atlantic states and began to increase in many Western ones for the first time. Western cities saw a new pattern in overdose deaths among older urban black men—many of them former crack or heroin addicts who acquired access to the particularly lethal drug Fentanyl in recent years (CDC, 2018). These increases in death rates began from a much lower level, though, and are several orders of magnitude smaller in scale than are existing trends in deaths of despair.

Figure 6. Geographical distribution of deaths of despair for non-Hispanic whites

Mortality rate (all-cause) by state, for whites aged 45-54 years old (per 100,000 people, 2010-2015 average)

Mortality rates (per 100,000)
- ● 51.5 – 61.7 (8)
- ● 45.0 – 51.5 (8)
- ● 39.3 – 45.0 (8)
- ● 36.3 – 39.3 (8)
- ● 33.1 – 36.3 (8)
- ● 17.1 – 33.1 (9)
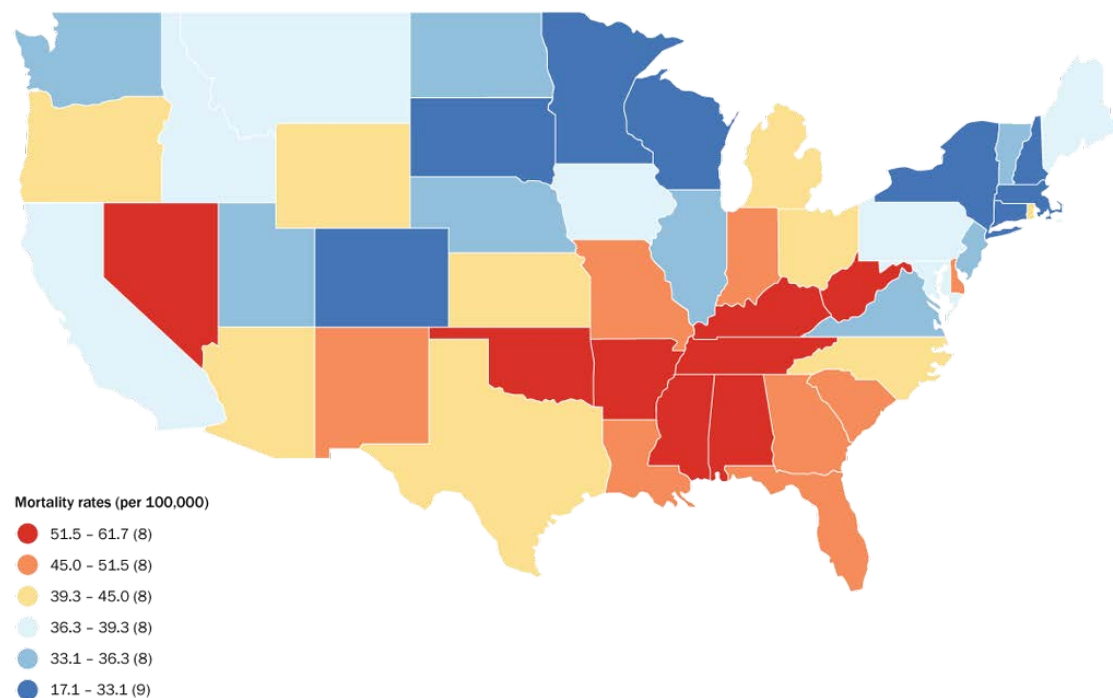
Source: Graham and Pinto (2018).

Our latest work highlights the intersect between particular demographic cohorts and places (Graham and Pinto, 2019). We find, for example, that prime aged males out of the labor force (OLF) are a particularly vulnerable group, with white OLF males being the most vulnerable, as evidenced by their very low markers of well-being. They are heavily represented in the heartland, and are more likely to be living with their parents than are either minority OLF males or white OLF women. Time use surveys show that they spend a disproportionate amount of time playing video games or on the internet. They are also much more likely to be on opioids, to report pain, and to be on disability than the average. Minority men and women, and white women are much more likely to multi-task (such as serving as care-givers) and to take low-skill jobs in the health sector, jobs which white men typically do not participate in. Minority prime aged males OLF, meanwhile, are much more likely to report to give back to or improve their communities than their white counter-parts.

Related to this, we examined the role of locational mobility, which has fallen compared to its historical levels, particularly since the 2009 financial crisis, which added the additional constraint of not being able to sell homes. Yet this decrease also reflects the increasing divide between low skill and high skilled jobs (and the differential rewards to them), and it is virtually impossible for a displaced coal miner in Appalachia to move to the West Coast and find a job (or an affordable home). There is also a selection bias in this story. Those or prime age who can leave depressed communities have a skill set (and perhaps a mentality) tend to do so. Those who tend to stay have less wherewithal and skills. They tend to live in the same places where jobs are declining and where opioid and other drug related deaths are high. These trends are not unrelated.

We examined well-being for those who live in counties with a high percentage of respondents who still live in their parents' census tract and those who still live in their parents' homes compared to respondents who lived in more places with more mobility (and diversity). We found that respondents in places with a high percentage of people still in their parents' census tract had low levels of hope for the future and bad objective health indicators (such as obesity, diabetes, and heart disease). They were, however, content with their lives in the present and were positive about their communities (particularly those who lived in homogenous white communities. Respondents in places with a high percentage of adult respondents still living in their parents' homes (many of which are likely OLF) had both bad objective health indicators and very low well-being markers, and in particular very low levels of hope for the future.

These trends fit the locational patterns that we have highlighted above, and again, reflect two Americas, with one group displaying resilience and optimism about the future, and the other high levels of despair and poor objective health indicators. The mortality map above highlights the same places where the latter set of cohorts are concentrated. In other work, in which we also map reported pain, reliance on disability, as well as hope and optimism, we find very similar geographic trends and patterns, as in the optimism maps below.

Figure 7. The role of place: What we know and don't know

Whites: Differences in optimism levels across states (2010-2015)

| No data | 0.00 | 0.15 | 0.15 | 0.18 | 0.18 | 0.21 | 0.21 | 0.24 | 0.24 | 0.28 | 0.28 | 0.61 |

Note: Controls include age, gender, marital status, education, employment, religious preference, year and month of interview. Optimism is measured by best possible life anticipated (BPLA) scores on a 0-10 scale.
Source: Gallup Healthways.

Minorities: Differences in optimism levels across states (2010-2015)

| No data | 0.00 | 0.13 | 0.13 | 0.18 | 0.18 | 0.22 | 0.22 | 0.26 | 0.26 | 0.29 | 0.29 | 0.37 |

Note: Controls include age, race, gender, marital status, education, employment, religious preference, year and month of interview. Optimism is measured by best possible life anticipated (BPLA) scores on a 0-10 scale.
Source: Gallup Healthways.

What can policymakers do?

Policy for opioid and related addictions, at least at the federal level, has focused on saving addicts from overdose death by extending the supply of "opioid antagonist" medications such as naloxone to first responders and relevant medical personnel. While more comprehensive efforts to prevent suicide—such as the work done by the Substance Abuse and Mental Health Services Administration—have existed for years, they have not received much support from the current U.S. administration. Meanwhile, the current efforts—$3.3 billion in grants to states since 2017 for prevention, treatment, and recovery services—are slated to lose funding next year (Goodnough et al., 2019).

What is missing is an approach that addresses the epidemic's root causes by dealing with *both* demand and supply issues. While the oversupply of opioids has recently become an issue in the courts—such as the case in New York against the Sackler family and Purdue Pharma—the current administration has not attempted to deal with the more fundamental problem. The recent lawsuit against Johnson & Johnson, for example, was again at the state level (Oklahoma), and it is unclear how much of the settlement gains will actually reach the victims versus going to pay legal fees. There is still debate about how much victims will benefit from the multi-state Purdue Pharma suit as it settles. Meanwhile, while there has been more medical scrutiny in recent years on the prescription of opioids, variance across places remains tremendous.

There is still no comprehensive policy approach for addressing the more complex demand problem. Addressing a crisis of desperation defies most standard policy definitions and policy prescriptions. Understanding differential resilience across population cohorts is even further from current policy discussions. Yet the root causes of the problem—which stem from the decline of the working class, the erosion of families, communities, and social capital, and an inadequate public health care system—are not going away and, even worse, are likely to spill over into the next generation. Many of those who are either addicted or have died from deaths of despair, for example, have children who are displaying signs of stress from experiences ranging from general neglect to witnessing their parents' overdoses. Such experiences will have a long reach into adulthood.

Which interventions have been successful?

How to restore hope? How to teach resilience? This is not an easy task, but there are lessons, most of which come from local level efforts, many of them run by non-government organizations.

Desperation can be reversed, as recent work based on well-being metrics by the What Works Well-Being Organization in the U.K. shows.[2] Interventions and simple programs that help people have better outlooks include increasing access to volunteering, the arts, and shared green spaces, all of which increase sense of purpose and reduce isolation. Interacting with community members is key to the well-being of people who have retired or dropped out of the labor force and are otherwise at home alone and vulnerable to depression and despair.

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2 See https://whatworkswellbeing.org/.

In 2015, scholars (including myself) and a team from the City of Santa Monica designed a well-being tracking index and related interventions in that community.[3] When the survey identified social isolation as a marker of low well-being, the city responded with programs that support community engagement. These included weekly group walks, library visits, and art projects, all of which had measurable effects on well-being. More generally, the metrics are critical to establishing such trends and identifying the vulnerable. While Santa Monica is surely a different venue than hollowed out communities in the heartland, many of the lessons from these efforts are more generally applicable and could even have more of a positive payoff in places where community organizations are weaker.

In my home state, the Maryland Behavioral Health Administration has programs that teach children growing up with addicted parents how to be resilient, which involves teaching a sense of competency, problem-solving, and coping, among other skills, beginning at the pre-school age through adolescence.[4] BeWell Orange County in California is developing similar programs across the life course.[5]

For such interventions to be effective over the long run, they must also help address the underlying causes of despair, such as lack of employment, sense of purpose, and hope for the future. These same issues increase vulnerability to addiction (Satel, 2019). While reducing isolation and providing purposeful engagement are effective strategies for older people who are unlikely to be re-employed, this is insufficient for the next generation. Younger cohorts need programs that train them with skills and tools to work in a rapidly changing economy. These skills can be acquired via vocational or community college education in many cases. The story of "comeback" towns in the heartland becoming the hub for the medium skill jobs outsourced by the tech industry is a promising if still developing example (Hendrickson, et al, 2016.

Communities—or lack there-of—also play an important role in the linkages between desperation, drug addiction, and premature death (Graham and Pinto, 2018). An example of an effort to improve well-being at the community level comes from the Center for Creative Place-healing at the University of Louisville, which supports the development of human capacities for innovation—such as vision, collaboration, and perseverance—and seeks to intersect these programs with efforts to raise well-being at the community level. The center's interventions are based on rigorous evaluation of pilot efforts.

Lessons from minority communities

We can also learn from the informal safety nets and community support common in African American and Hispanic communities. These include extended families, churches, and other social entities that give purpose and meaning to life beyond an income and a job. Unlike white Americans, some of whom had privileged access to the good manufacturing and mining jobs, minorities faced historical discrimination and had to rely on informal safety nets. This experience, meanwhile, likely led to more empathy for those who fell behind. In contrast, working-class whites who are now in need are still much less likely to trust the government and to believe in the importance of education than are minorities. Our work finds that the gaps

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3 See https://wellbeing.smgov.net/.
4 See https://bha.health.maryland.gov/pages/index.aspx.
5 See www.latimes.com/socal/daily-pilot/news/tn-wknd-et-youth-suicide-20190312-story.html.

in reported well-being across African American and white communities are the largest among relatively deprived cohorts, such as prime-aged males out of the labor force.

Sociologist Andrew J. Cherlin of Johns Hopkins University has extensively interviewed children of steelworkers from the now-defunct Bethlehem Steel complex in Baltimore (Cherlin, 2019). While African American steelworkers faced significant discrimination, many of their children attended college and moved to better neighborhoods. Yet they return most weeks to the church near the factory and reap the psychological benefit of giving back to their community. The children of the white steelworkers tended not to go to college and remain in the same neighborhood as their parents, but with inferior jobs. While this is not a large sample study, it is surely a very telling one.

My research with Pinto, meanwhile, based on a nationally representative survey, confirms large gaps in faith in the future (and in purpose and meaning) across poor whites and minorities, and shows that they are consistent ones, with the much higher levels of optimism among minorities persisting from well before the 2016 election and lasting afterward. While there is much more to understand, we need to do so if we are going to effectively address our crisis of desperation.

Exploring hope in survey research

My new survey research aims to explore how hope matters to future outcomes in several low-income communities (in Peru and the U.S.), with the objective of understanding the drivers of hope, its role in future outcomes, the patterns across different population, and how and whether hope can be restored among populations and communities where it is lacking. Answering this complex question could help counter the negative cycle of lack of hope, persistent poverty and inequality, and associated disincentives to investing in the drivers of better futures, such as health and education, with the most extreme outcomes being premature deaths, as in the case of the U.S. today. While hope alone may not be able to combat the negative effects of constant shocks and daily struggles, it may play a positive role.

Experimental studies, based on simple interventions that evoke hope, meanwhile, find significant resulting changes in behavior (Haushofer and Fehr, 2014; Hall et al., 2014). One such study finds that the provision of modest assets—such as a cow or other livestock—to poor people in developing countries results in increased work effort. Another study explored the potential of self-affirmation in lessening the mental toll of poverty in U.S soup kitchens. The driving channel in all these cases, as well as in other experiments, seems to be the provision of a hope channel where one previously did not exist. While these studies cannot reveal how long the behavioral changes last, they are suggestive of a virtuous circle. It is also possible, of course, that optimists mispredict their futures, resulting in frustration and unhappiness in the long-run. We are addressing this question in our survey research.

In collaboration with Dr. Mary Penny of the Instituto de Investigacion Nutricional (IIN), I explicitly tested similar propositions via a novel pilot survey of 400 poor and near-poor urban adolescents in Lima, Peru in early 2017. The data helped to understand the optimism channel by analyzing respondents' aspirations for future education, past shocks, and experiences, past and present life satisfaction, as well as other indicators (i.e., self-efficacy, discount rates/impatience, proclivity to risky behaviors). The analysis also differentiated between measures that relate to objective circumstances—such as higher income or better health—and those that stem from character traits and resilience.

Our survey questionnaire focused on the aspirations and behavioral choices of 18-19-year-olds, who are at a point in their lives where they have sufficient education and experience to observe, and yet are at a critical juncture in making key life choices. The study explored the past predictors of their current aspirations and life satisfaction responses, based on a battery of questions about their experiences, education and health status, relationships with parents, friends, and community, as well as life satisfaction, internal locus of control, self-esteem, discount rates, optimism, and education aspirations.

Overall, we found remarkably high education aspirations among respondents. Eighty-eight percent of the young adults aspired to complete college or post-college education, even though not one of them had a parent who had attended college. Most of the parents were construction workers, taxi drivers, domestic servants, or informal workers. In addition, most of those in the high aspiration category had experienced one or more negative shocks in the past, suggesting resilience. Respondents in the high aspiration categories were also far less likely to partake in risky behaviors, such as smoking or having unsafe sex. This supports the proposition that individuals with hope for the future are more likely to invest in those futures and to avoid behaviors that are likely to jeopardize them.

We are currently fielding a repeat of the survey, which will allow us to compare their outcomes compared to their aspirations in the initial survey in a second round this year, as well as to explore the role of individual character traits in driving the results. The repeat observations will also allow us to include person fixed effects in our regression analysis (an approach that allows us to control for the individual character traits of our respondents). It will also allow us to explore what if any role additional negative shocks play, and how resilient hope is to them. Given the objective conditions that respondents grew up in and the prevalence of negative shocks among the high aspirations group, there is likely a role for innate traits; yet poor Peruvians' strong family and community ties—and faith in education—is also a factor. These same characteristics also distinguish poor African Americans and Hispanics in the U.S. from poor whites.

A key question is if this channel operates the same way in different communities and cultures. In collaboration with scholars at Washington University in St. Louis and NORC in Chicago, we are fielding a modified (for language/culture) version of the Peru survey (with modest alterations for language/culture) in predominantly poor black and white neighborhoods (one each) in and near St. Louis, Missouri. This will explore whether the relation between hope and achievement differs across these populations, mirroring the large differences in optimism that have been found across races in the U.S. Pilot results suggest that even in the difficult context of St. Louis City, poor blacks are far more optimistic about the future than the counterpart low-income white populations across the river.

The most difficult of these questions, of course, is if there are ways to restore hope in places and populations where it has been lost. My work with the community level efforts above suggests that is possible to do so. The survey results will provide more context on the patterns in the drivers of hope (or lack there-of) in these very different deprived populations, as well as serve as a basis for designing an exploratory intervention that aims to increase hope among the sample of U.S. respondents where it is most lacking, beginning in these same populations in Missouri.

Expanded federal efforts?

There are, of course, many related efforts around the country. A federal-level effort to provide collective evidence and make it available to policymakers and non-governmental organizations around the country would be an inexpensive first step to jump-start the process. A bigger step, of course, would be to create a mechanism to provide federal funds to support efforts to enhance well-being among vulnerable communities on a systematic basis.

An initial policy, which could generate considerable bang for the buck, is to build well-being metrics into our national statistics collection. For example, the United Kingdom's government has included four questions in its official statistics for almost a decade that cover life satisfaction, meaning and purpose in life, anxiety, and contentment. These questions are short and inexpensive to administer. Yet they can serve as part of a national effort to track well-being and ill-being, an effort which could help identify not just *where* people are miserable, but *who* they are (e.g., individual demographics) and how likely they are to be vulnerable to addiction and other causes of deaths of despair.

Notable changes among particular cohorts (as we found in our historical data on optimism for less than college educated whites in the 1970s) serve as warning signs of vulnerability (O'Connor and Graham, 2019). Had we had such signs early on in the U.S., we would not be facing a crisis—and the associated implications for our nation's health, civic discourse, and politics—of the scale and complexity we have today.

Conclusions

Addressing widespread despair and the associated demand side of the opioids story will be essential to addressing the scourge of drug addiction and associated deaths in this country. Understanding the demand side of the story is particularly essential to preventing the next generation from suffering the same or even worse fate.

The patterns, though, are much more complex than divisions across the rich and poor. Specific cohorts—e.g., less than college educated whites—the former blue-collar working class—have lost faith in the American Dream, have little hope for the future, and lower levels of resilience and coping skills. This is the population that is most vulnerable to opioids and other deaths of despair, while minorities, who still face objective disadvantages and discrimination, are much more hopeful and resilient.

The geographic patterns in hope and desperation (and the related deaths) show a clear division between these populations, with more diverse and economically vibrant (as well as hopeful) places on the coasts of the country, compared to high levels of despair, opioid addition and premature mortality, and failing economies and communities in the heartland of the country.

While this is a complex, multi-faceted problem, there is a role for policy, at the community, local, and federal levels. There are many lessons that we highlight from the experience with interventions to increase well-being—and reduce isolation and lack of hope and purpose *and* community well-being.

These lessons could help craft a broader nation-wide strategy to combat the root causes of addiction and despair. In addition, as we note above, an information clearinghouse, funded and promoted at a federal level, could help communities that seek to turn around in their

efforts, as well as continue to collect lessons—about both success and failure—to serve as guidelines. There are also lessons from the resilience of minority communities that may be generalizable, and we hope our survey research sheds additional light.

Finally, there is a critical role for tracking trends in well-being, both as an input into strategies to enhance well-being, as well as to serve as warning indicators of vulnerable cohorts. We hope that our own work in building a vulnerability indicator contributes to this. Yet as the experience in other countries such as the U.K. and New Zealand shows, getting the approach and the metrics into official statistics and into central level policy decisions about public priorities and expenditure trade-offs makes it far more effective. Given the extent of the crisis in the U.S., it is time to do so. Federal efforts to support first responders and the provision of naloxone and other life-saving drugs, while key in helping prevent addicts from dying are, in the end, a band-aid on a hemorrhaging wound.

References

Blanchflower, D. and Oswald, A. (2008). "Is Well-Being U-Shaped Over the Life Cycle?", *Social Science and Medicine,* Vol. 66 (8).

Blanchflower, D. and Oswald, A. (2019). "Unhappiness and Pain in Modern America: A Review Essay and Further Evidence on Carol Graham's Happiness for All", *Journal of Economic Literature,* Vol. 57 (20), June.

Case, A., and Deaton, A. (2015). "Rising Morbidity and Mortality among Non-Hispanic Middle-Aged Whites in 21st Century America", *Proceedings of the National Academy of Sciences*, Vol. 112 (49), November.

Center for Disease Control and Prevention (2018), *Annual Report*, Washington, D.C.

Cherlin, A. (2019). "The Children of the Bethlehem Steele Workers", *Mimeo*, Johns Hopkins University, Baltimore, Md.

Douthat, R. (2019). "The Age of American Despair ", *The New York Times*, September 7.

Goodnough, A., Katz, J., and Sanger-Katz, M. (2019). "Drug Overdose Deaths in the U.S. Drop for the First Time Since 1990", *The New York Times*, July 19.

Graham, C. (2009). *Happiness around the World: The Paradox of Happy Peasants and Miserable Millionaires* (Oxford: Oxford University Press).

Graham, C. (2017). *Happiness for All? Unequal Hopes and Lives in Pursuit of the American Dream* (Princeton: Princeton University Press).

Graham, C., Laffan, K., and Pinto, S. (2018). "Well-Being in Metrics and Policy", *Science*, Vol. 362, No. 6412, pp. 287-288.

Graham, C. and Pinto, S. (2019). "The Geography of Desperation in America: Labor Force Participation, Mobility Trends, Place, and Well-being", Paper presented at the Annual Boston Fed Conference on Labor Markets in the U.S., Boston, October 4-5.

Graham, C. and Pinto, S. (2018). "Unequal Hopes and Lives in the U.S.A.: Optimism, Race, Place, and Premature Mortality", *Journal of Population Economics*, Vol. 32, No. 2: 665-733.

Graham, C. and Ruiz-Pozuelo, R. 2017. "Happiness, Stress, and Age: How the U Curve Varies Across People and Places ", *Journal of Population Economics*, Vol. 30, No. 1 (January).

Hendrickson, C., Muro, M., and Gallston, W. (2018). "Countering the geography of discontent: Strategies for left-behind places", *Metropolitan Studies Working Paper*, The Brookings Institution, Washington, D.C.

Isenberg, N. (2016). *White Trash: The 400 Year Untold History of Class in America* (New York: Viking).

Krueger, A. (2017). "Where Have All the Workers Gone? An Inquiry into the Decline of the U.S. Labor Force Participation Rate", *Brookings Papers on Economic Activity*, Fall.

O'Connor, K. and Graham, C. (2019). "Longer, More Optimistic Lives: Historic Optimism and Life Expectancy in the United States", *Journal of Economic Behavior and Organization* (forthcoming).

Pain in the Nation: The Drug, Alcohol, and Suicide Crisis and the Need for a National Resilience Strategy, 2017 (Washington, D.C.: Trust for America's Health/Wellbeing Trust); www.paininthenation.org/assets/pdfs/TFAH-2017-PainNationRpt.pdf.

Pierce, J. and Schott, P. (2016). "Trade Liberalization and Mortality: Evidence from U.S. Counties", *NBER Working Paper*, # 22849, Cambridge, MA (November).

Rauch, Jonathan (2018). *The Happiness Curve: Why Life Gets Better After 50* (New York: Thomas Dunne Books).

Reid, T. (2019), "Democrat Buttigieg targets mental illness, addiction in new plan", *Reuters*, August 23.

Satel, S. (2019). "The Truth about Painkiller Addiction", *The Atlantic*, August 4.

Stone, A., Mackie, C. (2013). *Subjective well-being: measuring happiness, suffering, and other dimensions of human experience.* (National Research Council of the National Academies, Washington, D.C.).