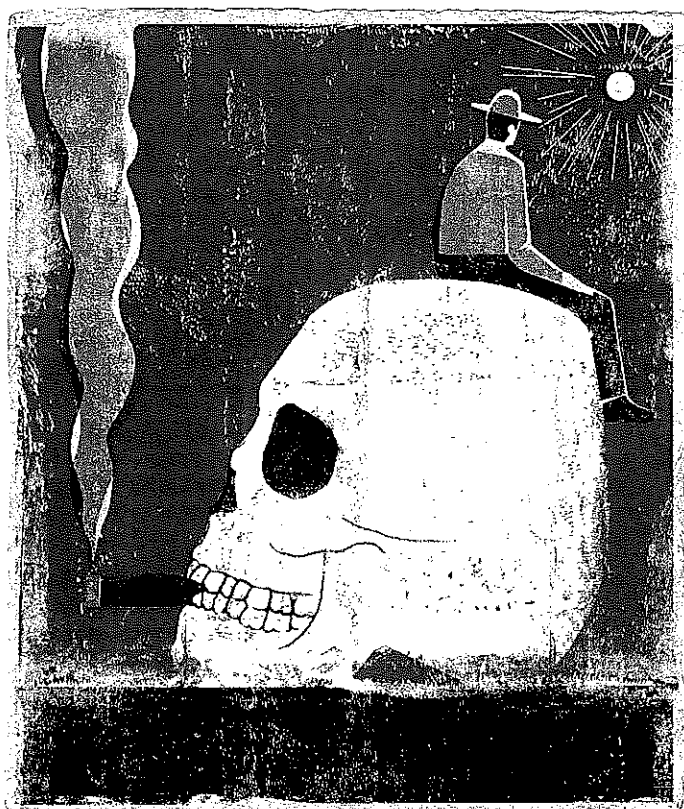


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The Ethnic Health Advantage

Two populations in the U.S. tend to outlive their often richer neighbors. Why?

For decades scholars and public health officials have known that people with greater income or formal education tend to live longer and enjoy better health than their counterparts who have less money or schooling. The trend holds true wherever researchers look—in poor countries or rich ones, in Europe, Asia or the Americas—but two notable exceptions stand out.

One is known as the healthy immigrant effect. Looked at as a group, immigrants to countries as diverse as the U.S., Australia, Germany and Canada live longer than their new native-born neighbors. Yet immigrants also tend to be less well educated and are often more likely to live in poverty in those countries.

The other exception is called the Hispanic paradox and is particular to the U.S. In study after study, people of Hispanic descent (typically of Spanish, Mexican, Cuban, Puerto Rican, or Central or South American origin) seem to live longer than non-Hispanic whites, who on average happen to be richer and better educated. In 2006, for example, life expectancy at birth in the U.S. was 2.5 years higher for Hispanics than for non-Hispanic

whites. The paradox is real; data errors, such as small sample size or the underreporting of Hispanic ethnicity on death certificates, cannot explain it. Yet the cause of the paradox has long been a mystery.

Recently I took a closer look at both the healthy immigrant effect and the Hispanic paradox with Andrew Fenelon, a graduate student at the University of Pennsylvania. Fenelon studies sociology and, like me, demography—a relatively small field that I often describe as the ecology of human populations. Just like ecologists, demographers are interested in the fertility, mortality and migration patterns of certain species; in our case, that species is humans. Samuel Preston, one of the world's leading demographers (and Fenelon's Ph.D. adviser), had a hunch about what might cause the U.S. Hispanics' longevity advantage in particular, and Fenelon and I had some ideas about how to test that hunch and to see if it applied as well to the immigrant advantage.

Today Fenelon and I believe we can largely explain both anomalies. If our research is correct, then it largely stems from just one factor—a factor that was hiding in plain sight all along.

UNRAVELING A MYSTERY

Scholars have come up with many hypotheses to explain the general immigrant advantage, and most of these ideas simultaneously attempt to account for the more specific Hispanic paradox as well. They link the two phenomena because many Hispanics in the U.S. are immigrants: according to the latest census data, two out of five Hispanics living in the U.S. were not born there.

Among the most popular explanations for the immigrant advantage is that such individuals might be unusually resilient, both mentally and physically. They must, after all, need energy and motivation to leave their homes and build a new life on foreign soil, the thinking goes. At the very least they are not likely to be on their deathbeds when they move. Perhaps, therefore, immigrants are simply healthier than the average person when they arrive in the U.S. Alternatively, maybe immigrants who get sick leave the U.S. and return home for care, which would then leave the population of remaining immigrants unusually healthy.

In addition to a putative immigrant advantage, proposed explanations for the Hispanic paradox generally emphasize culture and lifestyle. Hispanics in the U.S. could have stronger family ties that may help steer them through periods of ill health and stress. Another possibility: Hispanics might eat more nutritious foods. Or their work and leisure activities might be more physically demanding, which promotes physical fitness. All these notions are plausible. Yet to date, no studies have been convincingly able to link such behaviors to the Hispanic lifespan advantage.

One lifestyle factor, however, correlates with elevated death rates in almost every mortality study of any population in the world: smoking.

Could something as obvious as smoking explain immigrants' and Hispanics' life expectancy advantage in the U.S.? This is the theory that Fenelon and I set out to test. In 2009 and 2010 we conducted two analyses of National Vital Statistics System and Census Bureau data from 2000: one to compare Hispanics with non-Hispanic whites (with no regard to birthplace) and a second to compare immigrants with native-born Americans (with no regard to ethnicity). Regrettably, we could not specifically compare immigrant and native Hispanics; there are not enough data about older U.S.-born Hispanics to generate statistically valid estimates of total life expectancy for the purposes of comparison. In each analysis, we estimated the number of deaths attributable to smoking for each group we were comparing and then checked how much of the difference in total death rates could be explained by smoking. We used death from lung cancer as a marker for smoking-related death because lung cancer is the condition most strongly tied to smoking. We then used death from lung cancer to extrapolate death from all smoking-related conditions.

The strength of the results, published this year in the *International Journal of Epidemiology*, surprised even us. We found that smoking is the single best explanation of the Hispanic paradox and the general immigrant advantage, at least among adults. Our results show that in 2000 smoking explained more than 75 percent of the difference in life expectancy at age 50 between Hispanic and non-Hispanic white men and roughly 75 percent among women. It also accounted for more than 50 percent of the difference in life expectancy at age 50 between foreign- and native-born men and more than 70 percent of the difference among women. We cannot know from these estimates whether less smoking means that foreign-born Hispanics live longer than their U.S.-born Hispanic counterparts, because we did not estimate death rates separately for these groups. But recent data are not inconsistent with that idea: Fenelon has found that foreign-born Hispanics do smoke substantially less than U.S.-born Hispanics do.

People ask me how it is that no one noticed the role of smoking before. Of course, people did know that smoking is bad for health. But the extent of its role in health disparities between ethnic groups was not much recognized, perhaps because most studies of health habits in different populations have been based on large-scale surveys, which typically do not include tremendous detail about smoking and thus do not reveal differences in smoking habits between groups.

Consider, for example, a typical health survey, which somewhat resembles the health history form you often fill out when you visit a new doctor. The form will probably ask whether you smoke now and whether you used to smoke. But smokers and former smokers are rarely asked precisely how long they smoked and how many cigarettes a day they consumed at every point in their lives. Even if the questions were asked, people might misremember exactly how much they smoked several decades ago.

Nevertheless, a number of studies based on survey data have picked up some ethnic differences in smoking prevalence (whether or not people smoke)—and this was exactly the kind of information that inspired Fenelon and me to determine whether

smoking was the key factor in the Hispanic paradox. But those surveys have generally failed to notice ethnic differences in smoking intensity and duration or how much smokers are smoking. At least one set of data, however, does address such details. The National Health Interview Survey, an annual questionnaire that asks fairly detailed questions about tobacco use, has shown that Hispanics are not only less likely to be smokers or former smokers but that the smokers among them are also less likely to smoke heavily. In 2009, for instance, only 9 percent of Hispanic women were current smokers, compared with 21 percent of non-Hispanic white women; 18 percent of Hispanic men smoked, compared with 25 percent of non-Hispanic white men. Among smokers, Hispanics also consumed far fewer cigarettes on average.

When I say that the answer to the immigrant and Hispanic paradoxes may have been “hiding in plain sight all along,” I am referring to the kind of information in the national health survey. In the case of Hispanics in the U.S., scholars recognized that smoking prevalence was unusually low among that group, and

the data were there to check whether smoking intensity was low as well. But no one took the next step of calculating whether differences in total cigarette consumption could be so large as to drive the overall life expectancy advantage among Hispanics. My research with Fenelon has done that.

We estimated smoking-attributable deaths not from survey data but instead from aggregate

national death data: records of every single death in the U.S. in 2000. These data have plenty of their own drawbacks, to be sure. Crucially, our methods depend on the assumption that records of deaths from lung cancer are equally reliable in all subpopulations. To limit the impact of our assumptions on our final results, Fenelon and I used a few different methods to estimate smoking-attributable deaths, and the methods all yielded similar answers. We also took into account the possibility that immigrants may return to their home countries to die. We still found that, yes, smoking makes the difference in longevity.

I cannot say why Hispanics historically have smoked less than non-Hispanic whites. What is clear, however, is that millions of Americans have turned away from smoking since its health effects became obvious in the second half of the 20th century. Meanwhile cigarette consumption is on the rise in much of the developing world, thanks in no small part to strong marketing from tobacco companies. Together these two trends suggest that, over time, immigrants' life expectancy advantage in the U.S. may erode. I expect that both the immigrant advantage and the Hispanic paradox may disappear within the next few decades.

No one who reads this article will be surprised to learn that smoking kills. But sometimes we forget how profound its effects on health can be. In the case of Hispanics in the U.S., low cigarette consumption seems powerful enough to counteract a slew of socioeconomic disadvantages that often result in poor health and early death. That is a finding worth remembering for everyone. ■

HIDING IN PLAIN SIGHT:
A single, overlooked factor may well solve two demographic mysteries at once.

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