Kelly Brownell:

Hello, and welcome to Policy 360. I'm Kelly Brownell, the Dean of the Sanford School of Public Policy at Duke University. Today my guest is Jay Pearson. Jay is assistant professor at the Sanford school. In addition, he is an associate research professor in global health at duke university and is a faculty research scholar at Duke's Population Research Institute. Welcome, Jay.

Jay Pearson:

Thank you for having me, Kelly.

Kelly Brownell:

Jay, I invited you here to talk about the fascinating work that you've been doing around race and ethnicity and socioeconomic factors in human health. Your most recent research was conducted in Detroit, but before we talk about that, I wanted to go back to one of the very first studies you did, because it helps inform us about the most recent studies that you've done. That earlier study had a central question, do black women in the U S experience stress related biological aging. Where did you get the idea for that study?

Jay Pearson:

My contribution to that study was largely conceptual and theoretical and came directly from one of my dissertation papers, which was later published. And in that paper, I suggest that we cannot assume that conventionally measured socioeconomic status (SES) one or some combination of education, occupation, and income measured at the individual household or community level can be expected to influence health the same or similarly across all demographics or all population groups. So the relationship between SES and health can vary by for instance, gender, race, ethnicity, or region of the country in ways that are typically unexpected or unanticipated.

Kelly Brownell:

So why would you expect there to be such differences?

Jay Pearson:

So what we are measuring when we see, for instance, a gender or race effect are differences in the underlying lived social experience. And in a country stratified by those social identities, the likelihood that a woman will access education similarly to a man, and it can reliably translate into employment, and with that employment that she will have the same income, evidence suggests is simply not true. It doesn't happen that way.

Furthermore, a number of investigations suggest that there's considerable stress associated by gender, race, ethnicity, immigration status, or region of the country associated with aspiring to access those resources and have them reliably translate into the outcomes that we would typically expect.

Kelly Brownell:

So if I understand you correctly, knowing a person's social status like their income or education only tells you part of the picture, what might ultimately create a health profile, but you need to understand the other things like race and gender and issues like that.

Jay Pearson:

Absolutely.

Kelly Brownell:

In the work you were doing, you tested the women measuring something called a telomere. Can explain what a telomere is?

Jay Pearson:

Absolutely. Telomeres are the protective caps on the end of chromosomes that help cells maintain the integrity or their integrity as they reproduce. And typically we describe those as ... A good analogy is, think about shoelaces and the plastic caps on the end of shoelaces are the typical analogy folks use to describe telomeres. And every time the cell reproduces a small portion of that plastic cap gets lost to the point where there's almost none of the plastic ends on the shoe strings left. And at that point, the cells either die or they cannot function in a healthy way as they did previously.

And so the other thing is we've learned that telomeres are also stress responsive. And so the rate at which those telomeres degrade can also be influenced by stress hormones that are released in the body. And so if you have two people who are the same chronological age, and one person has had a particularly distressing life, those stress hormones have accelerated the rate at which those telomeres are degraded.

And that person will literally be biologically older than someone else who is the same chronological age, but has not experienced a life that is as distressing. And so it's a measure of biological aging in addition to the measure of chronological aging.

Kelly Brownell:

So what did you find?

Jay Pearson:

What we found is that at middle age that black women had telomeres that were on average, significantly shorter than similarly oriented white women. And it's important to note here that we had variables that actually measured conventional socioeconomic status (SES). And at the same level of SES that black women had, again, significantly shorter telomeres, which suggest that their biological aging process was indeed accelerated relative to white American women.

Kelly Brownell:

How big was the effect? I mean, how much additional aging was occurring, cell aging occurring in black women?

Jay Pearson:

So at around age 45 to about 49 it was somewhere in the neighborhood of six and a half to seven years of additional aging by middle adult years.

Kelly Brownell:

And that's a whopping effect, isn't it?

Jay Pearson:

It is.

Kelly Brownell:

When you think about that as a percentage of the numbers of years that the women had lived, that's really very profound.

Jay Pearson:

Absolutely. The other important factor is it varies by region of the country and by urban/rural status. And in another investigation that is not mentioned here we found that urban black women from socioeconomic disadvantage, regardless of how well they did later in life, had the shortest telomeres of all.

Kelly Brownell:

So how much of this can you ascribe to stressful life experiences among the black women and what sort of experiences do you think those might be?

Jay Pearson:

Yeah. So there are three different kinds of stress that we argue. One has to do with the nature of the neighborhoods that women live in and so there's an environmental effect. The other is social. That is day-to-day experiences with various forms of discrimination. And we can talk a little bit about the different manifestations of that. And the other has to do with financial hardship and material deprivation as a function of that. But again, it's important to note that above and beyond financial hardship and the material deprivation that we associate typically with that, there was a large, significant marked difference in the health of black women relative to white women as measured by telomeres.

Kelly Brownell:

So even when the black women had the same income as white women, and they're having different life experiences-

Jay Pearson:

Absolutely.

Kelly Brownell:

... that are probably showing up in many different ways and in their experiences, their psychological wellbeing and things like that. But to find that it actually influences the health of their cells is really a pretty remarkable finding.

Jay Pearson:

Yeah. It's an important finding. And the take home message for me, and if there's a single message that I'd like to have come through in all of these investigations, is that live social experience matters.

Kelly Brownell:

Explain what you mean by lived social experiences.

Jay Pearson:

So one example would be social discrimination. And for instance, black women who have more advanced formal education, again, you would expect that they would have more prestigious jobs that pay more money.

A working hypothesis that I'm aspiring to bring to bear in all of my work suggests that it may be the effort to get a more advanced formal education, expect that to translate into a more prestigious better paying job, that brings some populations, in this case black women, into more frequent and profound contact or interactions with institutionalized discrimination. And so perhaps the desire to realize the American dream, if we live in a society that is fundamentally stratified and discriminatory by gender, by race, and by socioeconomic position, that compromises the health and wellbeing of some populations.

Kelly Brownell:

Do you think society is recognizing that this additional stress exists in the lives of people who have to try harder to get to an outcome?

Jay Pearson:

In a word? No. And the reason that I personally believe it's difficult for many people in broader society to get their heads around this concept is we have a belief here that the United States of America is an egalitarian meritocracy. That we all have the same or similar access to primary resources of opportunity and that those reliably translate into the outcomes that society suggests we all should aspire to. And any evidence or arguments which suggest that that is not the case is met, again in my experience, with very real resistance in the form of ideological entrenchment.

Kelly Brownell:

Well, let's get back to the work that you've been doing. So your most recent work, again, measures the telomere, but this time you've looked at three different ethnicities and wealth categories. Can you describe that project for us?

Jay Pearson:

Absolutely. In this investigation we've done primary data collection in Detroit, Michigan, and three populations that we were interested in are black Americans, white Americans, and peoples of Mexican origin. Some are born in the US, some are born abroad. And specifically we were interested in the health impact, telomere length, of going from being impoverished to being not poor, so poor, not poor, in a distressed urban area. And Detroit was perfect for this kind of project.

Kelly Brownell:

So what have you found in that research?

Jay Pearson:

What we found is that SES, in this case going from being poor to not poor, was predictive of improvements in health for the white American population. We saw no difference in the health status of black Americans. And we actually saw increases in SES, that is going from poor to being not poor, being systematically associated with more compromised health for Mexican immigrants.

So if we stratify by poverty status, look at the poor, whites had really bad health, blacks had health that was superior to that of the whites, and the Mexicans had health that was superior to that of both blacks and whites. So you go from the poverty status to the non poverty status. We saw that whites who were non poor had relatively good health when compared to the whites who were poor. The blacks saw no improvement. And so, again, they are in between the Mexicans and the whites. And the Mexicans actually saw degradation in their health status. So their average telomere length was shorter when going from being poor to not poor.

Kelly Brownell:

It's really a pretty stunning finding. So what you're saying is that, if you know a certain fact about an individual, like they have a college degree let's say or they have a certain level of income, what you don't see in that is what it took to get there.

Jay Pearson:

Absolutely.

Kelly Brownell:

And you're saying, from what I hear, that the story that is what got somebody to where they got is very important in understanding them as a person and understanding their health status and the like.

Jay Pearson:

Absolutely. Absolutely. And the cumulative impact of that journey is what the telomere measure captures, right?

Kelly Brownell:

So what do you think this all means?

Jay Pearson:

Well, I think it means that the value of identity safe social environments can not be overstated. And how that gets translated into policy we're still very much in the process of working out, but certainly in a diverse learning environment like that here at Sanford we absolutely positively have to create spaces or we should aspire to contribute to a process of creating spaces that doesn't cost more for some people to achieve than it does for others. And so the value of considering discrimination.

Additionally, I'm working on a conceptual project right now that hopefully will inform another primary data collection project where we consider privilege, social privilege. And so not only does discrimination drive this, but there's something to be said for living in a broader social environment where you can expect the world to line up pretty much the way that the dominant social cultural group says that it should. And you have real returns on, for instance, your human capital investment. And so if you get that education, you can get the job, you can move up in the job and you will be compensated financially, economically per the generally prescribed script.

Kelly Brownell:

This issue of privilege is coming up more and more in discussions of race and inclusiveness. Tell me a little bit more about what that means in your mind, and when people are discussing that, what are they referring to?

Jay Pearson:

So there are five dimensions or at least my conceptual definition of privilege that I'm working with suggests there are five dimensions. One is it confers an advantage. That advantage is granted not earned. It is a function of a status position in the broader society. It comes at or it benefits those who receive it to the detriment of others. And finally, it is typically not recognized by those who are benefiting from it and in the event that it is recognized it never has to be acknowledged, all right?

Kelly Brownell:

So this is a different concept than outright discrimination and bias because people in certain disadvantaged groups may suffer from having the absence of these privileges. And there's also the presence of overtly negative things, but the absence of positive things becomes part of the picture as well.

Jay Pearson:

Absolutely both. And I feel like most social scientists, unfortunately, miss the privilege piece. And discrimination certainly has some currency now, and some folks are willing to acknowledge it, but privilege has not gotten nearly as much attention.

Kelly Brownell:

Well, thank you so much. Your work, Jay, is highly innovative and important, and I appreciate you sharing this with us.

I've been talking today with Jay Pearson. Jay is an assistant professor at the Sanford School of Public Policy at Duke University. If you like what you're hearing in this series, I encourage you to sign up for our podcast on iTunes. It's free and you'll receive the latest episodes as soon as they become available.

As always, thank you for listening. I am Kelly Brownell, the Dean at the Sanford School at Duke University.