

# A DISCUSSION ON AN INTEGRATIVE SOCIETY WITH PROFESSOR AMANI NURU-JETER

*Kuntal Chowdhary, Joshua Hernandez, Jessica Evaristo, Jingyan Wang, Ali Palla, Harshika Chowdhary, Mariko Nakamura, Kaitlyn Kraybill-Voth, Rhea Misra*

Though the phrase “stress can kill you” is often used in jest, the broader implications of chronic stress are often overlooked. Chronic stress is the slow poison that kills from within. BSJ Interviews had the pleasure of interviewing Professor Amani Nuru-Jeter to understand the broader implications of the “wear and tear” of stress and explore the root causes of the issue. Professor Nuru-Jeter’s broad research interest is to integrate social, demographic, and epidemiologic methods to examine racial inequalities in health, as they exist across populations, across place, and over the life-course. Professor Nuru-Jeter is also Principal Investigator of the African American Women’s Heart and Health Study, which examines the association between racism stress, cardiovascular biomarkers, and biological stress among Black women in the Bay area with particular focus on coping mechanisms; and Co-Principal Investigator of the Bay Area Heart Health Study which examines similar associations among Black men with particular emphasis on coping mechanisms and internalized racism.



**BSJ:** How did you get involved in your research?

**Prof. Nuru-Jeter:** I have several lines of research and my work on stress is one of those lines of research. I was working at the department of Health in Washington D.C. where I was getting my M.P.H. at George Washington University. I was doing a lot of work there, around trying to help communities of color and low-income communities navigate the public healthcare system, the Medicaid system, and other social service systems in order to meet their needs. I became very interested in the topic of social equity and inequity. I worked at the department of health and I did that for a year or so. After that, I worked at a non-profit organization and I am still doing similar work. It is interesting to do similar work from different perspectives. There is the government perspective, where we are creating and delivering programs to meet the needs of the community, and the nonprofit

perspective, where you are advocating on the behalf of the community. In both of those positions, I had the opportunity to work with various community groups and that was really my introduction to the disconnect between our service organizations with what we say are communities needs and what communities are saying their real needs are along with their barriers to access these services. I became really interested in the disconnect between service organizations in meeting community needs to better understanding the issues around equity and inequality and why, generally, colored and lower-income communities end up not being served as well as other communities. This sparked my interest in the idea of social inequality and I went back to school for my Baccalaureate and started doing more work in that area.

The work that I do is in a field called “social epidemiology”, trying to better understand better how

social factors, what we call “social determinants of health”, impact population health and health disparity. With my dissertation work in graduate school, one of the issues I was working on the community, was one of the issues related to accessing care in relation to high degrees of racial residential segregation and economic residential segregation that isolates these communities from many of the services that they needed. When I went to graduate school, I did my doctoral work on racial residential segregation, concentrated poverty, and differences in mortality between racial groups. That was all pre-Berkeley, when I came to Berkeley as a post-doc with the Johnson Health Society College Program and then joined the faculty two years later. As a post-doc, I began to talk to several psychologists just because of where our offices were situated. There was another post-doc program in the same office space. When I came to Berkeley, I used to think, “People don’t matter, places matter”. These “places” are what we call “macro-level social determinants of health”, structural ways that neighborhoods are set up disadvantaging certain groups and advantaging other groups. As I started talking to more psychologists, I grew to have a greater appreciation for the fact that environmental structures, like racial segregation, impact health in many different ways. Some examples include: having access to care, not having fresh fruits and vegetables in certain neighborhoods, having a greater police presence, or poor housing.

One of the things I asked myself in doing this segregation work is, “How does one come to internalize their social position relative to others?” For example, are you aware that your neighborhood is different from other neighborhoods? This issue brought me to this idea of stress, living in these neighborhoods and then perhaps knowing that your neighborhood is systematically different from other neighborhoods. Is there a process of internalizing stress that could impact health? This is how I got to my current work on the embodiment of social stress. Now, I’m greatly focusing on racial discrimination, which, again, has its roots in racial residential segregation. I would consider that to be a marker of institutional discrimination, but there are other forms of racial discrimination. What most people think about are one-on-one interpersonal experiences with racial discrimination. That is what I am studying right now, interpersonal discrimination and how that impacts health disparities among African Americans.

**BSJ:** What would you define as stress that is caused by this racial discrimination?

**Prof. Nuru-Jeter:** I define stress as a process. When I teach about this, I usually start out by saying, “How do you define stress?” Usually I get answers like “The test that I have to take next week”. The type of stress that I am talking about is the kind of stress that actually impacts the body. The “macro-level social determinants of health” that I previously mentioned can be perceived as stressors, so I would say that from social epidemiologist perspective, I would consider these macro-level social environmental factors as the root causes that set everything into process, from the physiological to psychological stresses. Racial residential segregation, including institutional and other forms of racial discrimination, along with environmental stressors impact health by being filtered through individual-level processes. A certain environmental factor can’t be considered a stressor without an individual perceiving it as a threat that begins the biological processes, typically associated with stress. If I had to intervene, reducing people’s biological stresses would be a short-term strategy and would be focused on threat appraisal and coping, which are parts of how we deal with these types stressors. However, those aren’t the root causes, so we can mitigate the short-term problem, but on the other side, this “fix” teeters on the edge of putting the responsibility on the victim to learn to how to cope better. What we really want to do is to create a more equitable society to certain groups of people, who are not disproportionately exposed to social stressors that are going to force them to have to cope with these stressors in the first place.

This was the empirical finding in the analysis of our research. I wouldn’t make that as a blanket statement across the board, but for that particular analysis, that is what we found. This initially seemed counter-intuitive, so we starting digging into the literature. One of the hypotheses stated: When there are racial minority groups in marginalized social positions, occupying social positions that are stigmatized, the higher a member of these stigmatized social groups climbs the social ladder, the higher the likelihood of them interacting with people that are not like them. Therefore, those with higher educations or higher incomes are more likely to spend most of their time or most of their day in a work environment with people that are not like them. There is greater opportunity to experience racial discrimination. For example, those with lower incomes or lower levels of education tend to be clustered in certain neighborhoods, working certain kinds of jobs. We hypothesized that when someone breaks free and climbs the ladder, they have a greater chance of experiencing racial discrimination

because they are near more out-group members, as opposed to in-group members, such as middle class from where they originated.

There is also a racial discrimination in African American communities. An interesting finding is that higher income Blacks, more so than lower income Blacks, might live in neighborhoods that are more integrated. When you are in a more integrated neighborhood or a more integrated workplace, you feel your minority status, you are aware of it more. So, there is terminology that we use for minorities in this kind of workplace, coined “solo status”. You are used to being “solo” because you are the only person that looks like you. I, personally, was often the only person that looked like me in my biology classes in college. When I was with other African Americans, I wouldn’t feel like a minority. Social marginalization is enough to cause stress. That is the theory behind why higher income minority groups experience more stress.

It is basically biology; there is a term called “allosteric load” commonly known as chronic stress. When one physiologically perceives threats, there is a natural way that our bodies adapt to those environmental demands through regulation of a variety of stress hormones like epinephrine, cortisol, and cortical inflammatory cytokines, which cause heightened inflammation in the body. All of these can be regulated in the body, and they are helpful in warding off immediate stressors, but in the long term, overproduction of these stress hormones can become toxic in the body and create susceptibility or a biological vulnerability to adverse health outcomes. With increased stress, we often see heightened inflammation in the body, which can be a concerning issue in pregnant women. An inflammatory pathway can make some women more susceptible to having with babies low birth weight or premature rupture of membranes. Another issue with this comprehensible biological state is that one can be more prone or more susceptible to infections. Infection is a big issue with respect to birth outcome. We know Black women, for example, have a higher incidence of bacterial vaginosis, which is an infection that can cause premature delivery and or other adverse birth outcomes. We also know that bacterial vaginosis is associated with the experience of chronic stress, so there has been research that has linked different parts of the puzzle and we are trying to put it all together to try to make sense of it. I am very interested in inflammatory pathways and I am interested in doing work that examines whether that inflammatory pathway, as an outcome of chronic stress, might be a pathway linking chronic stress to a variety of health outcomes like low

birth weight, preterm birth rate, and cardiovascular disease. The public health intervention doesn’t just intervene on this particular outcome or that outcome, but we intervene on the stress process or the biological mechanisms.

**BSJ:** Are you currently working on or involved in trying to find a solution to racial segregation and the connection to the inflammatory response?

**Prof. Nuru-Jeter:** I’ve moved a bit away from my research in racial segregation. Now, I’ve become very interested in individual-level processes related to stress. Currently, I am doing much work on the individual-level and my hope is to, at some point, bring it all to a full circle. I’ve done work on the macro-level – racial segregation concentrated poverty, income and equality. Now, I’m hoping to bring together, both macro-level and, what I call, micro-level factors or individual factors and to look at the intersection between the two.

I just finished a project called the “African American Women Heart and Health Studies”. This project examined the association between chronic social stresses and, in particular, racial discrimination, but we also look at other forms of social stress – both in mental and physical health outcomes in African American women. We’re just starting to look at the data now. Some of the preliminary findings show that it supports stress theories. One of the things that motivated this work for me is that much of the public health research starts by looking at discrimination in health outcomes. They look at discrimination as the stressor and some distant health outcome, like hypertension, without capturing a few key aspects of the stress response process like coping style. The goal of this study was to accurately depict all the stages of the stress process, so we developed some measures. We call them “culture-specific measures” of stress appraisal and coping style-specific to a African American women and what we’re finding is the prevalence of “anticipatory racism”, the idea that regardless of whether one experiences the threat or not, just anticipating the threat is enough to initiate the biological stress response. We found that people who experience high level of “anticipatory racism” threat end up having heightened inflammation in the body. This finding motivated our continued interest in inflammation; it looks like coping styles are moderating or influencing the relationship between discrimination and inflammation. It’s not just the stressor, but it’s the intersection between experiencing the stimulation in conjunction with how one appraises

that stressor and how they cope with that stressor. So, that's where the cusp of my work is right now and we're getting very interesting findings in this project. We're submitting grants for larger projects to continue doing work in this area.

One area that much of my work has been focused on is Black women. We know that because of issues they are very exposed to, like gender role norms (men have higher measures of masculinity compared to women). Women rank higher in "network stress". "Network stress" extends beyond individual stress, which means that women tend to be stressed out more so than men, not only from their own stress experience, but also the experiences of others in their social network, like their children, their spouse, and others. One of the things I'm interested in looking into is the degree to which Black men and women differently appraise their stresses and cope with their stresses. Those differences might impact inflammatory response.

**BSJ:** How can we, as UC Berkeley students, hope aid with these stressors? Is there anything we can do to reduce this inflammatory response?

**Prof. Nuru-Jeter:** We're still working on trying to learn more about that. We're still trying to see what works and what doesn't. So, I don't feel comfortable saying we should do this or that. Researchers are trained to always say we need more research, but one of the things we know about the UC Berkeley campus is that, again a lot of the work I do is about race, there are issues around race and other forms of social stigma whether it's sexual orientation, gender issues, or disability issues. Our most recent climate survey has shown us that there are groups that feel disrespected and its creating low levels of trust on campus from certain groups of people. If we really believe that we want to cut the chord, we have to cut the fact that people are experiencing those stressors to begin with. Thus, concerning racial discrimination or other types of discrimination, what I am trying to create a more inclusive type of community, where we celebrate differences, so that no group feels left out, so that no group feels like they are part of the marginalized or stigmatized group. If we just appreciate that we are one big community, it could make a lot of difference. If we do that, then maybe we could actually eliminate the stressor in the first place and teach people how to cope or act a certain way to protect our health. It has to be taken to a personal level and that is not something that can just be created by people. Like they say in the business world, the leaders of an institution have to set the tone of an environment that creates a more

inclusive community.

**BSJ:** In your opinion is it hard to get people to talk about racial problems

**Prof. Nuru-Jeter:** It is. I think it's because there are two different schools of thought. Some scholars will call one is "colorblind racism", where we say that race doesn't matter at all. After all, we have our first Black president. Well, if we say that race doesn't matter, we don't look at it, we don't try to improve racial relation. That creates a challenge.

Another school of thought states that race does matter, but the experience of racism might look different than it did 50 years ago. We're now still dealing with some acute insult, but also what we call "micro-aggression". Small subtle daily experiences or mistreatment, whether it's in the classroom or walking around campus, builds up and creates this swell of feelings of mistreatment that can wear down on a person. This is the "wear and tear" stated in my research papers that the body experiences from the accumulation of chronic stresses related to race over time.

**BSJ:** To conclude, in 20 words or less, can you please define what you want to see in a nonracial, unsegregated society?

**Prof. Nuru-Jeter:** That is a good question. I just want to see people, all working together towards a common goal. Towards creating a society that uplifts everybody, that doesn't just uplift one group of people or another, but creates the kind of system and infrastructures in society that gives everyone an equal chance from the start.

**BSJ:** BSJ Interviews would like to thank you for your time!

