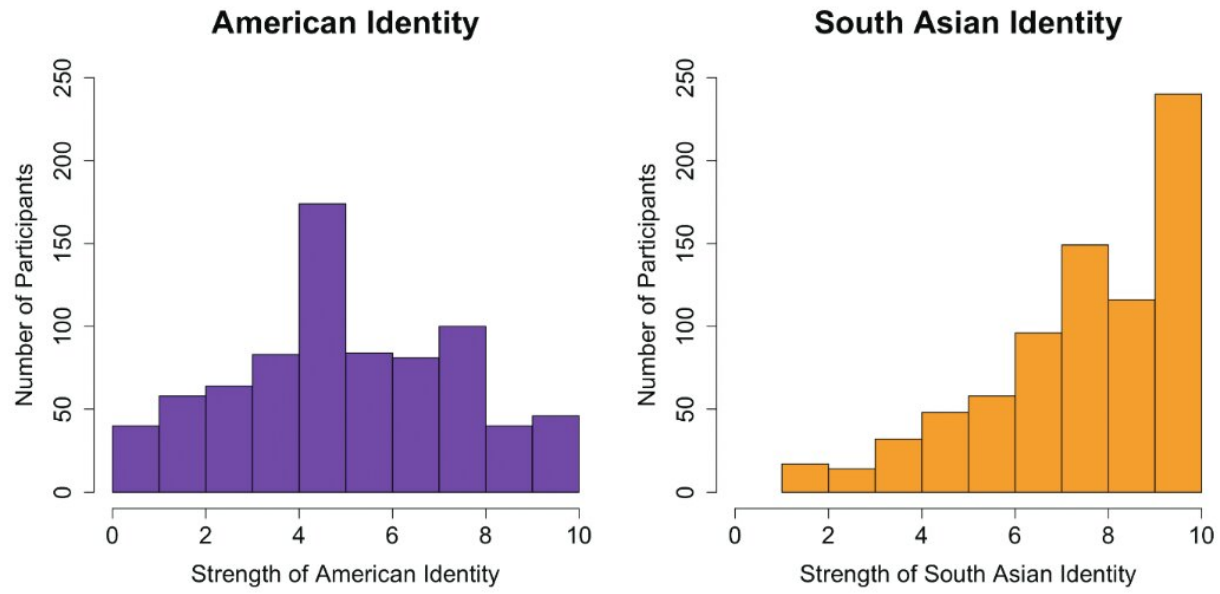
Why are South Asians dying of heart disease?

May 18 2023, by Michael Merschel



Distribution of self-rated American and South Asian identity scores in the mediators of atherosclerosis in South Asians living in America participants. Credit: *Journal of Asian Health* (2023). DOI: 10.59448/jah.v3i2.35

Like many people of South Asian ancestry, Anjana Srivastava can offer a long list of family members who've had heart disease.

"My grandfathers. My dad. My father-in-law. My brothers," she recalled. "My grandmother died from it. I don't think I even know a single family where someone doesn't have heart disease."

That's one reason Srivastava, who grew up in India but lives in the San Francisco Bay Area, signed up to be part of the first large, long-term U.S. study of heart health in South Asian Americans more than a decade ago.

That study is MASALA—the Mediators of Atherosclerosis in South Asians Living in America. Launched in 2010, it has uncovered important details about heart health in the fast-growing group.

The study is in the midst of collecting a third round of health data from its original participants even as it expands to capture a broader slice of the community. As Asian American, Native Hawaiian, and Pacific Islander Heritage Month is celebrated in May, the 100th scientific paper will be generated by the study, with some of the latest research now published in the *Journal of Asian Health*.

MASALA began with concerns that were both medical and personal.

Seeing the risk

South Asians—people with ancestry from Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka—are among the fastest-growing ethnic subgroups in the United States. More than 5 million South Asian people live in the U.S., census data show. Scientists have long been aware that the group faces a higher risk for heart disease, which tends to appear in South Asians earlier in life. Many researchers have seen that firsthand.

"I remember growing up as a second-generation immigrant in Texas and thinking, 'Why are the aunties and uncles dying?'" said Nadia Islam, a medical sociologist who leads MASALA's New York site.

Dr. Namratha Kandula, co-founder of MASALA, said the study set out

not just to identify the risks for South Asians but to educate those who treat them.

"When people did seek health care, their risk wasn't recognized, or they didn't feel like they were necessarily getting the advice or the treatments that made sense for them," said Kandula, a professor of medicine at Northwestern University Feinberg School of Medicine in Chicago.

In its search for answers, the study has shown that South Asian people:

- Have "a very high prevalence of diabetes and prediabetes, as well as high blood pressure," said MASALA co-founder Dr. Alka Kanaya, a professor of medicine, epidemiology and biostatistics at the University of California, San Francisco.
- Store fat differently than other ethnic groups in the U.S. In South Asians, fat gets concentrated on the liver, especially, and around abdominal organs, which "may be why there is so much diabetes, and possibly more cardiovascular disease," Kanaya said.
- Have higher levels of a type of cholesterol called lipoprotein(a), or Lp(a), which has been associated with a higher risk of heart disease and stroke.

MASALA also has shown that South Asians have strong social networks, Kandula said. Social isolation plays a role in overall health, so "it's very nice to see that in our community, people have prioritized having strong family relationships and strong personal relationships."

Dr. Eugene Yang, a professor of medicine at the University of Washington who is not part of the MASALA team, said the effort has produced so many significant studies, it's hard to single one out.

"Calling it a pioneering study is definitely well-deserved," said Yang, the school's Carl and Renée Behnke Endowed Professorship for Asian

Health.

In the past, data about South Asians was lumped in with other cultures under the label of Asian Americans, he said. MASALA collects information about subgroups that is "critically important" for ensuring proper treatment.

Kanaya said the interest in reflecting diversity is baked into the study's name.

Masala means a mixture, Kanaya said. Usually, that's spices or vegetables. In this case, it applied to a blend of people and cultures. But in getting the proper mix of people, researchers faced challenges rooted in the past.

A history lesson

It took years of writing grant proposals and explaining the importance of research on South Asians, Kanaya said, but the study finally launched in 2010 with 906 people between the ages of 40 and 84 from the Chicago and San Francisco areas.

But despite researchers' efforts to reach a diverse group, highly educated Indians made up most of the first wave. "This is a good example of where you see how structures and immigration policies end up influencing science and health research," Kandula said.

For much of the 20th century, racist policies banned or severely restricted South Asian immigration to the U.S. When quotas were lifted in 1965, the new laws favored skilled professionals largely made up of people from India. These were the people who showed up in MASALA's initial demographic.

So starting in 2017, "we enriched our sample with another 258 people," Kandula said. "But this time, we worked with community organizations to try to reach people who may not speak English, those of different South Asian backgrounds and who are of lower income and education."

The study also expanded to New York City. After a fresh round of funding in 2021 to add more Pakistani and Bangladeshi people, by next year the study will have grown to about 2,300 participants.

Findings have shown why it's important to get that broad mix of people.

Why diversity matters in research

Preliminary data from the study's latest round is seeing different levels and patterns of risk among South Asians, Kanaya said, with Bangladeshis having higher levels of diabetes and high blood pressure than Pakistanis and Indians.

"Now, is that because of socioeconomic status? Is that because of immigration experiences or cultural factors? Is it because of behaviors in terms of lifestyle and diet? Those are things that we're hoping we'll be able to really get into once we have the whole cohort in place."

Another example of the need to diversify can be found in findings about diet.

Vegetarianism, common in India, is often thought of as healthy. But MASALA identified three distinct dietary patterns among South Asians in the U.S.

Some South Asians eat vegetarian diets that are high in dairy products and saturated fats and low in fresh fruits and vegetables, Kandula said. Others eat a healthy vegetarian diet that includes more legumes and fresh

fruits and vegetables. A third group follows more of a Western diet, including meat, alcohol and coffee.

Those diet findings came from the initial participants, most of whom came from India, which is predominantly Hindu. The newest study participants will be predominantly Bangladeshi and Pakistani and majority Muslim, said Islam, an associate professor of population health at NYU Langone Health.

"They tend to be more of a meat- and fish-eating culture," she said, so future work will let researchers look into different diets, how religious practice affects them and how that affects health.

What it all means

Asian people are projected to be the largest ethnic and racial group in the United States by 2055. Yet because data is lacking, Yang said, the calculators doctors use to predict their heart disease risk default to those for white people.

"So that in and of itself is a problem, because the risk of cardiovascular disease differs between white people and Asian people," he said, noting that cholesterol targets in India are much stricter than those in the U.S.

So for health experts, Kanaya said MASALA's findings send a message that South Asians in the U.S. need extra attention from health care professionals, who should be aware that standard heart disease prevention guidelines might not be stringent enough.

Lack of awareness about such issues made recruiting MASALA participants a challenge at times among those who didn't see the need. "We definitely saw South Asian women who perceived that they were not at risk for heart disease even more reluctant to participate," Kandula

said.

It helped, Islam said, to emphasize the work's importance to future generations. "This is an immigrant community that we're working with," she said. "And almost 100% of their focus is on family and the future."

Kandula was moved when immigrants said being asked to be part of the study had sent them a message: "We matter."

Srivastava, the study participant from Newark, California, said MASALA certainly has treated her that way. She appreciates small touches like having chai—an Indian tea made with milk and spices—at the study site, and the way health advice is tailored toward healthier versions of traditional South Asian foods.

It makes her feel good, she said. It's why Srivastava, president and chief science officer of a health and wellness company, rearranged her busy schedule on short notice in April to come in for her third screening.

"I knew I had to be there," she said. "This is just so important."

More information: Ashwin Sunderraj et al, Association of American Identity with Cardiovascular Health in South Asian Americans: The MASALA Study, *Journal of Asian Health* (2023). DOI: 10.59448/jah.v3i2.35

Provided by American Heart Association