

AZ Illustrated Featured

Researchers Explore Roots of American Indian Resilience



Story by Gisela Telis

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Each week, inside the cafeteria of the [New Directions center](#), a Tucson behavioral health and substance abuse treatment facility, Tommy Begay channels heritage and history.

He calls on the Navajo prayers and practices he learned from his great-grandmother to help others heal.

“She taught me about this harmonious connection I could have with the universe,” he said. “She taught me about living a life of service.”

Like the people who join his talking circle at the center, Begay once battled addiction and trauma himself. Now, as a research associate with a joint appointment in the [University of Arizona Norton School of Family and Consumer Sciences](#) and the College of Medicine's department of psychiatry, Begay is working to understand the roots of the suffering he has seen in many Native communities, including his own.

“It wasn’t really until I left the Navajo Indian reservation that I realized there was a reason that my childhood experiences were what they were, and that basically something had happened,” he said. “There was an intergenerational cultural component ... that led to some very dysfunctional behaviors of substance abuse and violence.”



CAIR researchers Kerstin Reinschmidt (center) and Agnes Attakai (right) are working with Navajo elders like Nolando Neswood (left) to gather stories about resilience.

Begay said he believes that historical trauma —the legacy of forced assimilation, displacement and other painful events— has created a higher risk for intergenerational abuse and chronic disease in Native American communities.

That higher risk comes in part from the changes that experiences can effect in the body, even down to the DNA level.

Childhood trauma, for example, can tweak a person’s DNA. Studies have shown that adults who suffered severe stresses, such as abuse or neglect, during childhood [show poorer health in adulthood](#). They often have higher levels of nuclear factor kappaB, a kind of signal that tells a person's DNA what to do in response to stress and inflammation, Begay explained.

When children experience repeated trauma, it can wreak havoc on this signaling system.

“That lends itself to a higher concentration of this transcription factor, nuclear factor kappaB, and that’s what we see in adults who have had adverse childhood experiences,” Begay said. “And, because of this overstimulated stress response system, because of inflammation, you’re more likely to have a chronic disease at some point in the future.”

But resilience —the ability to cope with hard times in positive ways— can also have a physiological impact, and it can grow from Native American cultural and spiritual traditions.

New Directions and many other treatment centers across the country are finding that when they incorporate traditional practices, such as talking circles and sweat lodges, people are [less likely to drop out of treatment and more likely to enjoy better outcomes](#). Prevention programs that incorporate cultural activities also [tend to be more effective](#).

Scientists are still trying to figure out why, Begay said.

“There’s almost been nothing done, as far as research is concerned, on the neurophysiological and physiological impact of Native American prayer [and] Native American ceremony,” he said.

Begay and his colleagues have found that meditation and other spiritual practices induce physiological changes that ease the stress response and help build resilience in the process.

Begay plans to apply similar methodologies to learn how Native American ceremonies affect the body; to discover what he calls “the biology of hope.”

At the UA [Center for American Indian Resilience](#), researchers Kerstin Reinschmidt and Agnes Attakai are also studying how culture contributes to resilience.

They’re working with the [Tucson Indian Center](#) to gather stories about resilience from Navajo and Hopi elders.

“We’re asking the elders, ‘what has gotten you through difficult times or hard times, or your family?’” Reinschmidt said. “‘Being a Navajo or Hopi member, what can you draw from your culture that makes you strong?’”

Their work is revealing that traditional ways offer strategies for dealing with hard times, as well as a sense of belonging—two factors known to foster resilience.

“A lot of what we’re finding is that people, if they know ... what their roots are, it’s a source of strength,” Reinschmidt said. “It’s a source of pride and strength and a foundation to tackle problems in a traditional way.”

Begay, Reinschmidt and Attakai said they hope that by better understanding the connection between culture and resilience, they can help Native communities to rediscover their own strengths—to tap into the wisdom of the past to build a hopeful, healthy future.

In-Studio discussion about American Indian resilience:

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