Study on aging still going strong some 50 years later

Seattle-based scientist K. Warner Schaie has expanded our understanding of how the brain ages through his groundbreaking, decades-long Seattle Longitudinal Study.

By Richard Seven
Seattle Times staff reporter

K. Warner Schaie agreed to present findings from his exhaustive study on aging at last year's Washington State Psychology Association conference, but only if he could bring 28 guests. They ranged from 74 to 101 years old and had stuck with him for a half-century.

They were a handful of the 500 subjects who enrolled in the first year of the Seattle Longitudinal Study in 1956. Still going, it is considered by many to be the most extensive and lasting psychological research study on how people develop and change cognitively as they age. Information from it has helped change mandatory-retirement law and combat phrases like "having a senior moment" and other examples of ageism.

Schaie, who is 80, has published books, monographs, chapters and papers and testified before Congress about age discrimination in the workplace. But recalling the day he presented his information alongside the people instrumental in building the database makes him smile.

"One of my subjects, a 101-year-old woman, sat in the front row," he says. "And she was scribbling all these notes."

A longterm study

Every seven years, Schaie and his team have tested and added people to the study. About 6,000 people, in some cases representing three generations of the same family, have been tested at least once.

The study examines health, demographic, personality and environmental factors that influence individual differences. Subjects take cognitive tests and answer psychological questions while researchers try to learn why some people stay sharp well into old age while others falter.

In recent years, investigators have drawn blood samples and administered brain scans to add neurological evidence to the database, some of which might one day be relevant to the early detection of dementia.

Psychologist Alejandra Suarez, who teaches at Seattle's Antioch University, says following the progress of the same set of subjects for so long has made Schaie's study especially valuable.

"Many studies about how people change cognitively are done by asking people of different ages to participate in the studies — which is like taking a snapshot of how different generations function intellectually at a single moment in time. But those results are misleading because the differences can be due to changes in
"What Dr. Schaie has done is invite people to participate and then interviewed and assessed them every seven years, to see how a particular person changes and evolves, compared to his or her original abilities. This means that he can rule out that the changes are due to generational opportunities and challenges."

In the family

While an undergraduate at the University of California in 1951, Schaie worked in the composing room of the San Francisco Chronicle. Because the newspaper was published in the morning, he worked late into the night, shrinking the range of classes he could take and leading him to conduct an adult development study as a way to get credits.

His family doctor happened to have a geriatric practice, too, and allowed Schaie to survey willing patients. To Schaie's surprise, he was invited to present findings from his study at an international geriatrics conference in St. Louis. He got there by Greyhound bus and met some of the leaders in the small but growing field. When he was accepted into graduate school at the University of Washington, he chose, as his niche, gerontology.

"People would say who is this crazy young guy interested in old people," he says, laughing. "Why doesn't he do something 'mainstream'? It wasn't mainstream back then."

He got his initial sample (and every subject since) for the Seattle Longitudinal Study from Group Health Cooperative. He left Seattle upon graduation but continued to return to retest and add more to the study. Eventually he opened a permanent office here and began testing his subjects' offspring. The work is funded by the National Institute on Aging.

80 and still going

Having just retired from Penn State University, Schaie and his wife, fellow scientist Sherry Willis, moved back to Seattle. Willis has been co-investigator on the study since 1983.

The subjects also have helped scientists learn about whether people can recover mental function through intensive training sessions. That sort of work helped inspire the "brain fitness" software and books that flood the market today even though Schaie believes some of the claims behind those products have not yet been fully validated through research.

Along the way, he has studied how life events, from losing a spouse to recovering from cancer, affect a person's cognitive ability and has searched the data for nuances. There are all sorts of factors that can hasten decline, but Schaie has also seen cases where scores improve, such as when a cancer treatment has been successfully completed or someone has come to terms with a spouse's death.

"How you live your life makes a difference as to how you will move into old age," he says. "You don't suddenly become a member of a difference species when you grow old. It's clear that a person who is quick-minded and not rigid in his thinking has an advantage. Things change, but if you're a good problem solver or successfully handled a personal crisis when you were younger you will likely continue to do so."

He also believes that education and continuing curiosity may protect a person from rapid decline. Why does he, at 80, still collect and interpret the data?

"I really don't have any compelling hobbies that challenge me," Schaie says. "I find this stimulating, my work is still in demand to a degree and I get to remain in touch with my colleagues, who are also my friends — and that's important, too."

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