

Jennifer Manly, PhD — Neuropsychologist

ALZHEIMER'S DIFFERENCES

Jennifer Manly, PhD, researches how people's cultural experiences — especially the quality of their early education — affect their brains as they age.

Manly was intrigued when she saw research data showing that elderly African-Americans and Hispanics exhibited higher rates of Alzheimer's disease than elderly whites. She launched a research project in the neighborhood near Columbia University, where she works, to study how cultural and educational differences might affect the development and diagnosis of Alzheimer's. "I want to get people into the study who wouldn't normally be researched," she says. "We go out and see them in their homes. That's a really cool thing most psychologists don't do." The project administers a medical interview followed by standard neuropsychological testing.

LOOKING BEYOND GENETICS FOR ANSWERS

Manly discovered that most of the African-Americans living in the neighborhood she was studying grew up in the South in segregated schools, many of them in rural areas. "I found that your length of school year, the amount of money that the schools spent on students per year and your student-teacher ratio explain how well you do on memory, executive function and language tests in older age across race," she says. So while many researchers were looking for genetic causes of Alzheimer's among African-Americans, Manly discovered an educational element. When she compared the results of memory tests of African-Americans to white Americans who had received the same quality of childhood education, Manly found no difference in the rate of cognitive decline.

As a result of Manly's research, clinicians studying such maladies as HIV/AIDS, multiple sclerosis and head injuries are also looking at school quality as a possible factor for cognitive impairment. Noting that research data are not always properly applied to answer key questions, she says "I strongly believe that we should use science to get to the right answers."

LITERACY'S IMPACT ON MEMORY

Another area Manly is studying is how the literacy level of older people might affect changes in the sharpness of their memory over time. "I found that elders with both high and low levels of literacy declined in immediate and delayed memory over time," she says. "However, the decline was more rapid among low-literacy elders." This suggests that high literacy skills don't provide complete preservation of memory skills, but rather help slow age-related decline.

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BRAIN SCIENCE AND COGNITIVE PSYCHOLOGY

Psychologists working in the field of brain science and cognition study how the human mind thinks, remembers and learns. They use psychological science to understand how we interpret events and make decisions.