Meet Marianne Chanti-Ketterl*

Q&A with Marianne Chanti-Ketterl, MD, MSPH, PhD, from Duke University in Durham, North Carolina

Q: Tell us a little about what you are doing right now.

A: I am completing my first year of the postdoctoral program at the Center for Aging and Human Development at Duke University. My research interests focus on the link between the cardiovascular system and cognitive function and/or dementia. My current primary research project assesses the links between environmental exposures (e.g. lifelong exposure to pesticides), cardiovascular risk factors and Alzheimer’s disease in the Agricultural Health Study of Memory in Aging.

Q: Tell us about your most recent activities and accomplishments?

A: Receiving the 2-year T32 Postdoctoral fellowship at Duke has been by far one of my biggest recent accomplishments. Recently, I also become a member of the Board of Directors for the Alzheimer’s Association Eastern North Carolina Chapter. I love to serve and being part of a group that strives to find a cure for Alzheimer’s disease.

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–Marianne Chanti-Ketterl

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In North Carolina, drivers over 65 years of age must get their licenses renewed every five years instead of every eight years, but there are no additional medical tests. Some states and some provinces in Canada require medical screening for older drivers in an attempt to lower their crash rates. However, there is much debate about the effectiveness of these mandatory age-based tests.

In fact, the evidence seems to indicate that they are not effective. Every state in the USA that has mandatory age-based screening of older drivers has higher senior crash rates than neighboring states that don’t. The same pattern holds in Canada and Europe. Apparently the intimidation factor of the mandatory tests drives many of the safest drivers off the road, lowering the quality of the senior driver population.

Even worse, these tests appear to increase senior pedestrian and cycling fatalities. Walking and cycling are more dangerous, per distance traveled, than driving.

The main problem appears to be that there are no accurate tests for fitness to drive. Candrive conducted a large study using tests recommended by the American Medical Association and they found no correlation between the test results and crashes in their driving records.

So since mandatory medical screening for older drivers does not work, imposing them on drivers just because of their age appears to be another form of ageism.

*Based on evidence cited by Bill Bears (cbbears@shaw.ca).
Alzheimer’s disease by not only supporting research but by giving so much back to the community has been a true honor.

Q: Have you had an important mentor(s) in your career? If so, how did it make a difference?

A: All of my mentors have been important and have impacted me in different ways. Dr. Theresa Beckie from the College of Nursing at the University of South Florida was my first mentor and the one that opened my eyes to the research field. I don’t know if I would be here without her initial support. Dr. Balebail Raj was not only my boss at the Byrd Alzheimer’s Institute but he also became a mentor. He taught me most of what I know about Clinical Trial Research and was supportive of me pursuing a PhD. Dr. Ross Andel and Dr. Alyssa Gamaldo were my mentors throughout my PhD studies. Both challenged me to always improve and push my limits and for this, I thank them. I became a better researcher because of them. Today, my co-mentors Dr. Deborah Gold and Dr. Brenda Plassman have very important but different roles in my career and research development. Dr. Gold is my career/life guide and keeps me focused on the aging research path, while Dr. Plassman teaches me what high impact research is about. Both keep me productive and provide me with the tools and opportunities I need to build my career.

Q: What are your motivations (inspirations) for studying aging?

A: I first became interested in the prevention of cardiovascular disease and was fascinated by how much it can impact cognitive function. I quickly realized that most research in this area focused on young and middle age adults with little attention to the older ones. The more I researched, the more I became involved and it just all took a snowball effect.

Q: Tell us about your involvement in GSA.

A: I became a member of GSA in the fall of 2012 when I became an Aging PhD student and have been a part of the Behavioral and Social Science Section ever since. I have volunteered since I joined to the extent I have been able to. I have rated abstracts for poster and symposiums since 2013 and have physically volunteered behind the scenes from stuffing program bags to being part of the welcoming volunteers at registration this year. It just feels right to give a little back. GSA Scientific Sessions have served as a platform for me to grow as a scientist presenting my research as well as connecting me with a network of many wonderful people. Every year I build larger and stronger ties.

Q: How do you feel GSA serves the field of gerontology and aging research?

A: I feel GSA is the home for gerontologists across the globe. It is that place (organization) where we keep connected and allows us to share what we are doing, network, teach and learn from each other. It is an enriching environment for all interdisciplinary aging researchers and gerontologists.

Q: Is there anything unique about yourself and experiences that you would like to share?

A: My journey into aging has definitely been a unique nontraditional career experience. I first studied medicine because it had been my passion and I wanted to be a surgeon. But then life happened...I married, became a Mom, and around that same time my father was diagnosed with cancer. I unexpectedly became a multigenerational caregiver so priorities had to be rearranged. I looked for a part time job doing research since the working hours were more flexible and the rest is history! My interests changed and my passion for aging research grew.

Q: Do you have any tips for emerging gerontologists?

A: For those just starting a research career, know that it is hard work! It takes long hours; consistency; determination and/or lots of stubbornness; thick skin (some crying backdoors); and a bit of luck (blessings for me). One important thing is to enjoy the process and have fun, otherwise nothing makes sense.

$200,000 GIFT

In February the Aging Center was notified of a generous gift in the amount of $200,000 from the estate of George Abramson. The late George Abramson showed great interest in the research conducted in the Aging Center and left the Center with this generous gift to support general research operations. We are grateful for this support and will ensure that his memory will live on in future research endeavors that will be supported in his name.
Several of my colleagues urged me to feature myself in this spot and at first I demurred, thinking that it would be immodest of me. But then I was persuaded that since I have been on the faculty at Duke for 50 years, it is time that I gave some accounting for those years.

I first came to Duke in 1948 as an undergraduate (class of ’52) before there was a discipline called gerontology. After getting my graduate degrees and teaching at Yale, I was hired by the Social Security Administration to analyze the data from the first national Survey of the Aged in the United States. That was a “learning on the job” experience and made me one of the first gerontologists in the U.S.

I returned to Duke in 1967 and joined the faculty of the Department of Psychiatry and Behavioral Science with a joint appointment in the Department of Sociology. My main job was to coordinate and analyze data from the Duke Longitudinal Studies. Results from these studies were published in the five volumes of the Normal Aging series (Duke Press, 1970-1981). I also published a couple of handbooks on aging during these early years as well as an analysis of aging in Japan compared to other countries (The Honorable Elders).

Ageism

However, while teaching a course on Race Relations I became aware of similarities between racism and the emerging field of ageism, and I started doing some research on ageism. As part of this research, I began collecting jokes about aging and analyzed the stereotypes they reflected. Little did I know that this first analysis of ageism in humor would lead to an entire sub-specialty in the study of ageism.

About the same time, Frank Whittington (now a Dean at George Washington University) and I developed a way to statistically measure the effects of ageism, sexism, and racism using data from the U.S. Census. We called it the Equality Index (EI) because it measures the degree of similarity in the frequency distributions of any given characteristic (such as income) in two categories of people (such as aged vs. younger). When we compared the effects of ageism with racism and sexism we found that some-

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times ageism was stronger (as in education) and sometimes racism or sexism were stronger; but that when two or three of these “isms” were combined, their effects were generally additive (creating double or triple jeopardy).

Facts on Aging Quiz (FAQ)

As a way of trying to capture students’ interest in gerontology by showing them how many misconceptions they had, I developed a 25 item true/false quiz about the facts on aging. This was so effective that I used it on many other groups and published the results. Since then the quiz has been widely used for various purposes, including as a measure of ageism. By 1997 there were over 150 known reports of studies using the quiz.

Some of the main findings of these studies:

- Most people know little about the facts on aging.
- Education is the main variable that makes a difference in knowledge about aging.

- The most frequent misconceptions about aging reflect negative stereotypes.

Because of the interest in using the FAQ as an indirect measure of ageism, I developed a more direct measure, the Ageism Survey. It has 20 items which describe events or situations resulting from ageism. Older people respond as to whether they have experienced this situation and if so, how often.

I also developed an instrument which asks people directly as to whether they have engaged in any of negative (e.g. making fun of old people) or positive acts of ageism (e.g. complementing older person on how well they look). We called it the “Relating to Older Persons” (ROPE) survey, rather than an ageism survey because we suspected that most people would not want to admit to ageist acts.

The last measure of ageism I developed was an attempt to measure age denials which are disguised as health behaviors, such as getting plastic surgery to look younger. Most people admit to one or more of these actions.

Texts on Ageism

I have attempted to summarize the theories and research on ageism in a textbook (*Ageism: Negative & Positive*). More recently we have published a more comprehensive summary in the form of an *Encyclopedia of Ageism*. These texts support the following conclusions:

- Ageism is widespread even though most people are still unaware of it.
- Ageism creates needless fear, denial, waste, and misery.
- Ageism can be reduced by the same methods that have been successful in reducing racism and sexism.
- Slow progress is being made against ageism.

I am deeply grateful to Duke University for the opportunity to pursue 50 years of fascinating research on aging and ageism.

Welcome New Postdoctoral Researcher

Dr. Shelytia CoCroft, received her Ph.D. in Medical Sociology at Wayne State University where she was a Michigan Center for African American Aging Research (MCAAR) Diversity Scholar. Her dissertation work, which was supported by a two year National Institutes of Health (NIH) grant, examined the impact of socioeconomic status on knowledge of and attitudes toward cognitive decline, and how these influence individual practices associated with cognitive health maintenance among older African American women in Detroit. Her primary mentor is Dr. Kathleen Welsh Bohmer, Director of the Joseph and Kathleen Bryan Alzheimer’s Disease Research Center and Co-Principal Investigator of the REVEAL-SCAN Study. The REVEAL-SCAN Study is designed to examine the impact of disclosing amyloid imaging results to cognitively normal results. As part of the REVEAL-SCAN team, Dr. CoCroft’s work focuses on examining the knowledge that older African Americans have about Alzheimer’s and whether that knowledge influences participation in clinical trials such as the REVEAL-SCAN Study.
**FREQUENTLY ASKED QUESTIONS*  
Does aging impair your memory?  

“My memory is not getting better, but my ‘forgettery’ is getting stronger.”

Up until about 10 years ago, brain researchers equated age-related memory loss with brain cell death. But thanks to recent neural imaging techniques, they discovered that aging itself does not cause a significant loss of neurons in the hippocampus, a part of the brain involved in storing and retrieving memories. Furthermore, the good news is that new neurons may even be added to the hippocampus in adulthood— which destroys the old belief adults can’t grow new brain cells.

Now it appears that, if there is some memory loss with aging, it is probably caused by a reduction in the chemicals that facilitate communication and coordination between different parts of the brain. The bottom line is that memory loss is not an inevitable withering away of neurons; and that there are things you can do to preserve and boost your memories.

*Adapted from Palmore, Older Can Be Bolder, Amazon, 2011.

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**AWARDS**

A new NIH initiative that joins Dr. William Kraus of our Pepper Center and the Duke Center for Living with researchers at Wake Forest and Eastern Carolina University, aims to gain insights for disease prevention. The Duke project, which is made possible by a grant of $5 million over six years, will focus on questions of when and how exercise-induced molecular changes revert back to baseline.

Doctors Terri A. Moffitt and Avshalom Caspi received an American Psychological Association 2016 joint award for Distinguished Scientific Contribution. The award was for innovative research and theory on mental health and human development in which they have demonstrated how early life experiences shape health disparities and how genetic factors shape and are shaped by environmental factors. Both are Senior Fellows in our Center.

Congratulations to Jennifer Dungan, the first recipient of the 2016 Precision Health Collaborative Grant, a joint initiative supported by the School of Nursing and CAGPM (Center for Applied Genomics and Precision Medicine). Her study is entitled “Female-specific genomic risk score prediction of acute coronary syndrome: a pilot study.” Co-investigators include Dr. Xuejun Qin from Computational Biology and Abanish Singh from Behavioral Medicine.

The APA (American Psychological Association) made a 2016 joint award to Terri A. Moffitt and Avshalom Caspi for Distinguished Scientific Contribution. Awarded for “innovative research and theory on mental health and human development” in which they have demonstrated “how early life experiences shape health disparities and how genetic factors shape and are shaped by environmental factors.” They are both Senior Fellows of our Center.

The Duke Institute for Health Innovation (DIHI) has made an award to Lagoo-Deenadayalan, MD, PhD, and Mitch Heflin, MD (Principal Investigators) for their project on “Optimization of perioperative care through machine learning.”
It’s not uncommon to slip, trip and fall as you get older, but a recent study by Duke researchers shows that it’s still possible to delay those threats if you pay closer attention to physical activity.

Published in June 2016 in the Journals of Gerontology, the study by Duke faculty shows that physical declines often begin in the 50s, but combating the body’s slowdown can be achieved by focusing on basic strength and endurance exercises in the years prior to reaching that threshold.

“Our research reinforces a life-span approach to maintaining physical ability – don’t wait until you are 80 years old and cannot get out of a chair,” said Katherine Hall, assistant professor of medicine and senior fellow at the Center on Aging. “The good news is, with proper attention and effort, the ability to function independently can often be preserved with regular exercise.”

Her advice may be particularly useful for Duke faculty and staff: according to Duke Human Resources, the average employee age is 44, which falls in an ideal decade to focus on fitness to help curtail physical decline. The study, which included participants from their 30s through their 100s, showed that a physical slowdown was similar across gender and race/ethnicity as people aged.

Dealing with loss of strength and mobility is something Noah St. John works to prevent with Duke Health and Fitness Center members. As a registered dietitian and certified exercise specialist, St. John tries to highlight the importance of strength, aerobic and flexibility training.

“Aging isn’t a bad thing, it’s a natural part of the life cycle and beats the alternative,” St. John said. “If your body is naturally declining physically, the way you slow that is by constantly giving it a challenge so it responds by increasing strength, stamina and athleticism to better handle that challenge.”

St. John said "the key is creating a routine that fits the level of activity necessary for an active life. If the goal is to golf 18 holes and not feel worn out, finding ways to add cardiovascular activity and weight resistance are key. You shouldn’t be going to a gym and not breaking a sweat or not getting out of breath," he said. "A routine should be a challenge you can barely meet. The focus should be on lifting weights and aerobic activity that makes you feel tired and puts enough stress on muscles to work but not overly strain them," he added.

“You use training to make your body adapt,” St. John said. “Instead of your body feeling tired and worn out at 55, you can push that out 20 to 30 more years.”

* Adapted from Working at Duke, January 23, 2017.

SLOGAN FOR THE DAY:

It’s not how old you are, but how you are old.
April 6-9: Annual Conference of the Southern Gerontological Society, Ashville, NC.
Contact: www.southerngerontologicalsociety.org.

May 18-20: American Geriatrics Society Annual Meeting, San Antonio, TX.

July 5-7: British Society of Gerontology Annual Conference, at Centre for Innovative Ageing, Swansea University, Wales, United Kingdom. Contact: BSGconference2017@swansea.ac.uk.


September 8: The 2nd Annual Center for the Study of Aging Retreat will be held at Trent Semans Great Hall, DUMC.