

Decision Making by the Elderly Is Uncharted Territory

Contributed by University of Oregon

The human brain's ability to process information declines with age, but knowledge about the world through experiences tends to rise over time. So how do these shifts affect a person's ability to make sound decisions?

It turns out that it depends on the situation. In some decisions, thinking harder about unfamiliar information will produce the best decisions, and older adults are likely to fare less well, says Ellen Peters, courtesy professor of psychology at the University of Oregon and senior research scientist with Decision Research. But in other situations, she said, people make better choices when they rely on emotions and past experiences, and older adults may excel in this condition.

More research is needed to understand how decisions differ across the lifespan so that better advice can be tailored to older adults, Peters said. "We know quite a bit about how the brain processes information, but we don't know a whole lot about how that is going to interact in decisions with experiences and emotional prompts," she said.

Peters is co-author of a paper in which she and colleagues examine existing literature about the aging brain and decision making. Little is known about this important topic at a time when Americans are looking at a fast-growing elderly population, she and colleagues write in the quarterly journal *Perspectives on Psychological Science* (Volume 2, Issue 1). By 2050, they note, there will be more people older than 65 than those younger than 15 for the first time in history.

"Having a high quality of life requires good decisions, yet we know next to nothing about age differences in decision making," Peters said. "For many elderly individuals, the ability to function independently is a particular concern. By understanding when the elderly make decisions as well as or better than young adults and when their decisions are compromised by declining cognitive abilities, policymakers, family and friends can better target situations in which assistance is more necessary and other situations where it is not needed."

The review article looked at basic information processes and mechanisms that have been studied around the world, using a dual-process approach. One process involves how people think their way through information; the other focuses on how they feel their way through it.

"There were robust differences in these systems," Peters said. "Thinking capacity declines with time. We learn less easily. We process information more slowly." However, from the emotional side of processing, "We may show improvements over time. We may tend to feel our way through decisions more when we are older."

While that improvement may exist, older people who respond emotionally may be more prone to becoming victims of scam artists, who often play on emotion, Peters said.

An emerging idea, she added, is that an older person's motivation may change from the forward-looking vision of a young person to one that prioritizes feeling good in the moment. She noted a just-published study in the journal *Psychology and Aging* by Corinna E. Löckenhoff and Laura L. Carstensen of Stanford University that found that older people focus more on positive benefits than on negative risks in making health choices.

Understanding the effects of these processes is vital to improving aging people's decision-making, Peters said. "Older people who make mistakes have less time and less physical resiliency to compensate for bad decisions than do younger people," she said. "Older people are more vulnerable. We may not be able to teach an old dog new tricks, but the old dog may have lots and lots of old tricks that help quite a bit. In some situations, the old dogs may be making better decisions than the pups."

Peters began looking at this topic while studying how the presentation of information impacts medical decisions by older people, particularly issues involving Medicare and prescription drug options. In one study, participants were asked to pick the lowest co-payment among four insurance policies. A simple chart showed the plans, monthly premiums and co-payments, but more than 40 percent of 80-84 year olds failed to choose \$5 from options ranging from \$5 to \$15.

With aging people being faced with major decisions affecting their ability to live independently, including finances and retirement, medical treatments, when to quit driving and what food to eat, understanding age differences in how information is processed in decisions has important theoretical and pragmatic implications, Peters said. "Dealing with numbers, for example, is an area in which older adults require more assistance," she said.

In a separate study, published in the April issue of the journal *Medical Care Research and Review*, Peters and another group of scientists concluded that "less is more" in the presentation of numbers portraying medical

information. In three studies, 303 employment-aged adults from 18 to 64 years old weighed various amounts and formats of information about hospital treatments. Simple presentations dramatically helped people with lower number-processing skills understand more and make higher quality decisions. Researchers also found that the use of symbols sometimes helped people make decisions and other times hindered them.

Co-authors with Peters on the study in *Perspectives in Psychological Science* were Thomas M. Hess of North Carolina State University, Daniel Västfjäll of Decision Research and Goteborg University in Sweden and Corinne Auman of Presbyterian College in South Carolina. The report was supported by the National Science Foundation, the National Institutes of Health and the NIH National Institute on Aging.

Co-authors with Peters on the study appearing in *Medical Care Research and Review* were: Nathan Dieckmann, a graduate teaching fellow at the University of Oregon and researcher at Decision Research; Anna Dixon, lecturer in European Health Policy at the London School of Economics and former visiting scholar in the UO Institute for Policy Research and Innovation; Judith H. Hibbard, professor of planning, public policy & management at the UO; and C.K. Mertz of Decision Research. The study was funded by the Blue Cross Blue Shield Association and the National Science Foundation.