# Decision making changes with age - and age helps

August 18 2011

(Medical Xpress) -- We make decisions all our lives—so you'd think we'd get better and better at it. Yet research has shown that younger adults are better decision makers than older ones. Some Texas psychologists, puzzled by these findings, suspected the experiments were biased toward younger brains.

So, rather than testing the ability to make decisions one at a time without regard to past or future, as earlier research did, these psychologists designed a model requiring participants to evaluate each result in order to strategize the next choice, more like decision making in the real world.

The results: The older decision makers trounced their juniors. The findings will be published in an upcoming issue of *Psychological Science*, a journal of the Association for Psychological Science.

"We found that older adults are better at evaluating the immediate and delayed benefits of each option they choose from. They are better at creating strategies in response to the environment," says Darrell Worthy, of Texas A&M University, who conducted the study with Marissa Gorlick, Jennifer Pacheco, David Schnyer, and Todd Maddox, all at the University of Texas at Austin.

In the first experiment, groups of older (ages 60 to early 80s) and younger (college-age) adults received points each time they chose from one of four options and tried to maximize the points they earned. In this

portion, the younger adults were more efficient at selecting the options that yielded more points.

In the second experiment—the setup was a sham test of two "oxygen accumulators" on Mars—the rewards received depended on the choices made previously. The "decreasing option" gave a larger number of points on each trial, but caused rewards on future trials to be lower. The "increasing option" gave a smaller reward on each trial but caused rewards on future trials to increase. In one version of the test, the increasing option led to more points earned over the course of the experiment; in another, chasing the increasing option couldn't make up for the points that could be accrued grabbing the bigger bite on each trial.

The older adults did better on every permutation.

"The younger adults were better when only the immediate rewards needed to be considered," says Worthy. "But the second experiment required developing a theory about how rewards in the environment were structured. The more experience you have in this, the better you are better at it."

The psychologists conjecture that these results are related to the ways we use our brains as we age. Younger people's choice making relies on the ventral striatum, which is related to habitual, reflexive learning and immediate rewards: impulsivity. But as this portion of the brain declines, older adults compensate by using their pre-frontal cortices, where more rational, deliberative thinking is controlled.

"More broadly, our findings suggest that older adults have learned a number of heuristics"—reasoning methods—"from their vast decision-making experience," says Worthy. Another word for this, which the psychologists use in their title, is wisdom. For older people, it may be

nice to know that this sometimes-undervalued asset has been ratified in the lab.

Provided by American Psychiatric Association

Citation: Decision making changes with age - and age helps (2011, August 18) retrieved 20 March 2024 from https://medicalxpress.com/news/2011-08-decision-age-.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.