

Older Adults Prefer Less Choice Than Young Adults

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Previous research has demonstrated that older adults prefer less autonomy and seek less information when making decisions on their own relative to young adults (for a review, see M. Mather, 2006). Would older adults also prefer fewer options from which to choose? The authors tested this hypothesis in the context of different decision domains. Participants completed a choice preferences survey in which they indicated their desired number of choices across 6 domains of health care and everyday decisions. The hypothesis was confirmed across all decision domains. The authors discuss implications from these results as they relate to theories of aging and health care policy.

Keywords: aging, choice, decision making, preferences

“... [W]e’re going to provide a prescription drug benefit, and as we do, we’re going to give seniors more choices and more options from which to choose.”—President George W. Bush, February 17, 2006

“I’m 85, do I have to go through this nonsense? I’m trying to absorb all the information, but it’s ridiculous. Not just ridiculous, it’s scary. If there was a single card, and it was administered by Medicare, and it got the cost of drugs down—wonderful, marvelous.”—Senior citizen quoted in *The New York Times*, May 12, 2004

November 15, 2005, marked the beginning of what was undoubtedly the largest pseudoexperiment ever conducted on decision making among an aging population: Forty-three million older adults already enrolled in Medicare were given the opportunity under the nascent Medicare Part D program to select a prescription drug care plan from dozens of alternatives.¹ The average number of options increased to 42 in 2006 and continued to grow to 55 choices in the following year (Simon, 2007), prompting headlines such as “Medicare Part D: Tyranny of Choice” (Oakland Tribune, 2006) to appear in the popular press. Remarkably, of the 43 million individuals eligible to enroll in Medicare Part D, only slightly more than half of them (22.5 million) received coverage within 7 months of the program’s inception (Henry J. Kaiser Foundation, 2006). Moreover, among these 22.5 million, it is likely that less than half (a little over 10 million) actually made an active decision to enroll in a plan, while a little less than half that number (4.4 million) did not make a choice and remained uninsured for pre-

scription drugs. How could so many seniors fail to sign up for prescription drug plans when there were dozens of options from which to choose? And how likely are those who did sign up for a plan to have preferred less choice than was presented to them?

The proliferation of options appeared to stem from a tacit assumption, as illustrated by the opening quote from President Bush, that older adults would surely benefit (both financially and psychologically) from having more choice. Indeed, the notion that ample choice is not only beneficial to our well-being but also an essential component of modern life seems deeply ingrained in the conscience of American society. To be clear, there is support for the value of choice in enhancing our sense of identity and individualism (e.g. Markus & Kitayama, 1991), and according to advocates of rational choice theory, having more options should lead to objectively better decisions (e.g. see Payne, Bettman, & Johnson, 1993). However, mounting evidence suggests that choice, when excessive, may impair the subjective quality of decisions.

Having too many options not only undermines decision satisfaction but may also sap our motivation to choose (for a review, see Botti & Iyengar, 2006). For example, Iyengar and Lepper (2000) showed in a series of experiments that individuals who choose from “excessive” choice sets (24 or 30 options) in a range of domains (from chocolates to optional essays) are significantly less likely to commit to a choice and express less satisfaction with their choices than people who select from a relatively limited set (6 options). This inverse relationship between choice and satisfaction has been dubbed the “paradox of choice” by Schwartz (2000, 2004), who suggested three potential mechanisms whereby excessive choice undermines satisfaction: inflated expectations or standards, an enhanced sense of personal responsibility for poor outcomes, and excessive difficulty in acquiring and processing information about alternatives. And, although the latter mechanism would seem especially relevant to older adults given age-related declines in working memory capacity (see, e.g., Mikels, Larkin,

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¹ Medicare prescription drug coverage was signed into law in December 2003 under the Medicare Modernization Act, and coverage began January 1, 2006. Seniors could begin plan selection on November 15th, 2005.

Reuter-Lorenz, & Carstensen, 2005), we know of no study that has explored the impact of excessive choice on this age group.

Additionally, to our knowledge, there is no research directly examining whether older adults actually desire as much choice as is provided to them. However, converging evidence of age-related declines in preferred choice autonomy and information seeking in decision making (for a review, see Mather, 2006) suggests that choice preference should decline with age. For example, older adults report more deferential tendencies and desire less responsibility when making hypothetical health care decisions than young adults (Finucane et al., 2002). Moreover, when older adults make decisions independently, they seek less information than young adults and rely more on heuristic strategies (Johnson, 1990). Older adults show this pattern of reduced information seeking even with regard to decisions that should be of greater personal relevance, such as medical decisions. For instance, when faced with a hypothetical patient's choice of whether to begin estrogen replacement therapy, older women were significantly less likely than young women to seek a second opinion or gather additional information (Zwahr, Park, & Shifren, 1999). Insofar as added choices entail more information, we expect that older adults would desire fewer choices.

In addition to increasing the amount of information in a decision, added choices may also enhance the likelihood of experiencing regret with one's decision (Schwartz, 2000). According to the theoretical perspective of Schwartz, as the number of options increases, so do the perceived tradeoffs (opportunity costs) and expectations for decision quality, both of which may lead to negative affect associated with one's choice (i.e., regret and dissatisfaction). This mechanism seems especially relevant in the context of aging, given prior research findings that older adults' decision strategies, relative to those of young adults, may serve emotion regulatory goals. According to socioemotional selectivity theory (SST), young adults are more likely to pursue knowledge-related goals and engage in information seeking, whereas older adults are more likely to pursue emotionally meaningful goals and engage in emotion regulation (Carstensen, Fung, & Charles, 2003). In particular, older adults' regulation strategies are marked by optimization of positive affect and minimization of negative affect, leading to an age-related positivity effect (Carstensen & Mikels, 2005). For example, older adults attend to and recall more positive versus negative information in decision tasks than do young adults (Löckenhoff & Carstensen, 2007; Mather, Knight, & McCaffrey, 2005). One avenue by which older adults engage in emotion regulation is through selective information search, as illustrated by Mather et al. (2005) and Löckenhoff and Carstensen (2007). However, another means of preventing potential negative affect in decision making may be through restricting the choice set. As such, one would expect young adults to desire more choice (insofar as more choice represents more information), whereas older adults would desire less choice, so as to preserve their satisfaction.

While there is ample evidence of age-related changes in decision-making style and motivation, we know of no research that has examined how the amount of desired choice varies with age or how it varies by type of decision. In the present study, we addressed this empirical gap by directly questioning older and young adults about their ideal level of choice in a variety of domains. Given the converging evidence from research on cognitive and motivational aspects of older adults' decision making, we pre-

dicted that they would desire fewer options than young adults. However, in light of the apparent lack of prior research findings or theories regarding domain specificity in preferred choice, we remained "agnostic" about whether there would be a difference in the degree of choice desired between different domains.

Method

Participants

Ninety-nine undergraduates at Cornell University, aged 18–24 years ($M = 19.72$ years, $SD = 1.29$), participated in exchange for course extra credit. One hundred and two older adults, aged 60–94 years ($M = 78.36$ years, $SD = 7.65$), recruited from two senior centers in New York City received \$10 each for their participation. There was no difference in years of education between young adults ($M = 13.56$ years, $SD = 0.97$) and older adults ($M = 12.97$ years, $SD = 3.46$), $t(184) = -1.63$, *ns*.

Materials and Procedure

Participants completed a series of pen-and-paper questionnaires, which included demographic measures and a choice preferences survey. The choice preferences survey asked participants to indicate their desired number of choices in six domains. Half of the domains (prescription drug plans, physicians, and hospitals) involved health care and the other half (cars, apartments, and jams) involved everyday decisions. Participants indicated the number of options that they would like to have available for each of the decision domains. Additionally, for each of the domains, participants were asked to predict which choice set from a list of sets (seven sets with the number of options ranging from 2 to 26 in intervals of 4) would make them most satisfied.

Results

Responses to the two choice measures (preferred number of options and number of options for greatest satisfaction) were highly correlated (average $r > .7$). We thus averaged responses to the two questions to create a composite measure of preferred choice for each domain. All subsequent analyses were conducted on this composite measure of choice.

After observing that the distribution of the composite measure was skewed, we performed a log-transformation to normalize the distribution.² To test our hypothesis that older adults would prefer fewer choices across the six decision domains, we conducted a repeated-measures multivariate analysis of variance on the log-transformed composite measure of choice with age (young vs. older) as a between-subjects factor and domain type (health care vs. everyday) and specific domain (nested within domain type) as within-subjects factors. In order to facilitate interpretation, we

² We also tested alternative means of controlling for the skewed distribution, both by omitting outliers in the choice data and recoding them as two standard deviations above the mean. All reported results remained significant for these alternate analyses. Given the equivalence of the three sets of analyses, we reported the log-transformed analyses so as to maintain the integrity of the original raw data as much as possible.

report the raw means in the following paragraphs, even though the statistical analyses were conducted on log-transformed data.

As predicted, older adults preferred significantly fewer options ($M = 4.83$, $SD = 4.12$) than young adults ($M = 9.81$, $SD = 15.16$) overall, $F(1, 196) = 76.59$, $p < .001$, as well as in each of the six decision domains (see Table 1). To examine the possibility of domain-specific effects, we tested differences in the preferred number of options between health care and everyday domains. As depicted in Figure 1, both older and young adults preferred significantly fewer options for health care decisions ($M = 5.59$, $SD = 5.96$) than for everyday decisions ($M = 9.13$, $SD = 14.84$), $F(1, 966) = 180.65$, $p < .001$. However, the gap in preferred choice between health care and everyday domains for young adults exceeded that of older adults; $F(1, 966) = 7.22$, $p < .01$.³

To further investigate the influence of age on the degree of preferred choice and to test the possibility that these differences were simply due to cohort effects, we performed correlational analyses within the older adult group.⁴ As expected, age was negatively correlated with preferred choice for older adults, $r = -.45$, $p < .001$.

Discussion

As predicted, older adults preferred significantly less choice than young adults across six different decision domains in two categories, and even within the older adult group, this preference strengthened with age. Additionally, while both age groups preferred fewer options for health care decisions than for everyday decisions, we observed a smaller gap between the two domain types for older adults.

Results of the present study raise issues at both the theoretical and applied levels. In the current study, older adults desired (overall) roughly half the number of options that young adults preferred. Consistent with the work of Iyengar and Lepper (2000) showing increased satisfaction with fewer options and the implications of SST (Carstensen et al., 2003), the reduced choice preference of older adults may reflect the prioritization of emotion regulation. As such, the results of the current study complement those of Löckenhoff and Carstensen (2007) in suggesting an additional means by which older adults may enhance the subjective experience of decision making.

Alternatively, the finding that older adults desired a more manageable amount of choice than their young counterparts may

constitute an adaptive response to the metacognitive recognition of reduced decision-making competence. Finucane et al. (2002) reported evidence that older adults rate their abilities in gathering information from tables and charts—skills that may be central to certain forms of complex decision making—lower than do young adults. However, Finucane et al. did not examine concordance between these assessments and participants' demonstrated abilities by age group. Thus, while the present findings raise the possibility that older adults may hold more realistic assessments of their decision-making abilities than do young adults, additional research would be needed to directly test this implication.

In addition to the predicted main effect of age on choice preference, we also observed an interaction between age and domain type (everyday versus health care) such that young adults showed a greater difference in preferred choice between health care and everyday decisions, relative to older adults. This effect may result from differential salience of the domains to the young and older adults. While everyday domains such as cars and apartments are ostensibly more significant than health care decisions for young adults, the importance of the two domains may be more equal for older adults. However, such a conclusion remains tenuous without direct measures of personal relevance or significance.

As with any study, there are a number of important caveats to keep in mind. First and foremost, given the cross-sectional nature of this study, cohort effects may have influenced our results. Although our samples did not differ in years of education, some of the older adults had not received a college diploma, which most of the young adults will presumably obtain. And though these potentially discrepant education levels could partially account for the present results, a subset analysis comparing the more highly educated older adults with the college student sample yielded similar results to the overall comparison, suggesting that an age-related decline in choice preference exists independently of educational influences. Moreover, the correlational evidence of an age-related decline in preferred choice within the older adult sample further argues against cohort effects. These safeguards suggest that the results are not entirely driven by cohort effects, but, without a longitudinal design, generational differences may still influence choice preferences. It should be noted, however, that contemporary policy implications of the present study are still highly relevant despite alternate influences to those hypothesized: Today's older adults desire far less choice than is offered to them.

Another potential limitation is that we did not specify how the quality of the options might or might not change with the number of choices when we asked participants about their desired degree

Table 1
Desired Number of Options for Older and Young Adults

Domain	Age group				<i>F</i>
	Young		Older		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Drug plans	6.17	4.71	4.22	3.94	21.04
Physicians	9.47	10.55	4.77	4.16	50.46
Hospitals	5.59	4.33	3.60	3.19	24.65
Cars	19.49	31.02	6.04	5.12	118.89
Apartments	9.52	8.50	5.67	4.30	33.94
Jams	8.57	9.12	5.34	3.89	22.63

Note. For *F* statistics in all domains: Degrees of freedom = 1, 185; $p < .001$.

³ Although these results reveal differences between older and young adults matched on education, an underlying cohort effect may still be present. Presumably as the young adults are currently enrolled in college, they will likely achieve a higher level of education than the older adult sample. To safeguard against this possible influence, we conducted a subset analysis comparing the more highly educated older adults (excluding participants with fewer than 12 years of education) with the college students; results showed no differences from those of the analysis of the entire sample.

⁴ Given the restricted range of ages within the young adult cohort, we did not perform a similar test for them.

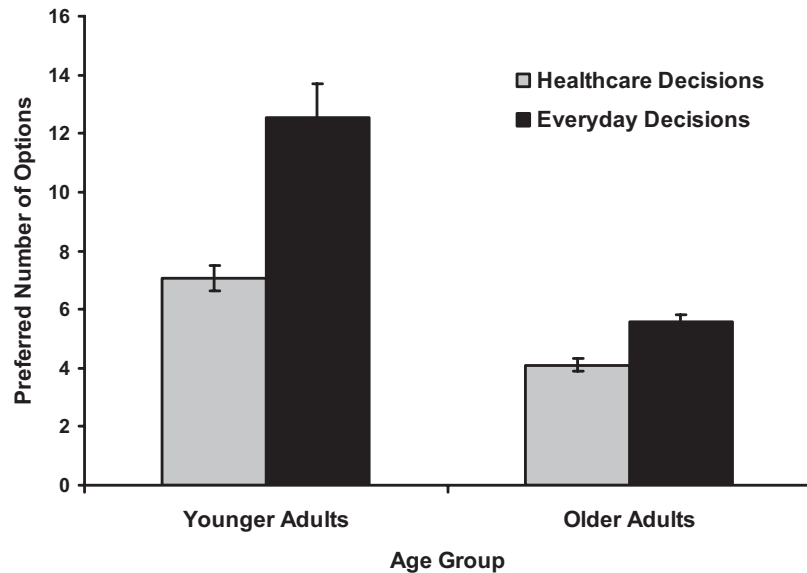


Figure 1. Mean number of preferred options ($\pm SE$) by age group and decision domain. There was a significant main effect of age such that older adults preferred fewer options than young adults, a main effect of domain such that all adults preferred fewer options for health care decisions than for everyday decisions, and a significant Age \times Domain interaction such that the difference was even greater for young adults relative to older adults.

of choice. As such, an additional mechanism behind the observed age differences in preferred choice may be diverging intuitions as to the function or correlates of choice. For example, young adults may believe that greater choice implies higher quality or lower prices for options through market competition, while older adults may not possess such optimistic lay theories of choice. In future studies, researchers might find it beneficial to directly measure participants' intuitions about choice and to eliminate potential ambiguity concerning the choice sets in question by specifying that they do not differ on cost or quality.

If the hypothetical choice experiment that we conducted and described here can be extrapolated to the real-world Medicare Part D decisions that older adults face, these data suggest that the number of prescription drug care plans offered to senior citizens is more than 10 times the number of choices they prefer. In light of previous work on the ill effects of excessive choice (e.g. Botti & Iyengar, 2006; Schwartz, 2004), providing such a large number of drug plan choices to older adults (as happened under Medicare Part D) may actually impair enrollment rates or choice satisfaction, all other factors held constant. At the outset of this article, we questioned how 4.4 million older adults could have failed to choose a heavily subsidized prescription drug plan out of the dozens of plans offered through Medicare Part D. Given the misfit between older adults' choice preferences and the staggering number of Medicare Part D options presented to them, perhaps the real question to ask is how so many older adults (roughly 10 million) succeeded in navigating the sea of choices and selected their plans. While such an answer requires further research, results of the present study highlight a simple reality: For drug plans or jams, 55 choices may be too many, especially for older adults.

References

- Botti, S., & Iyengar, S. S. (2006). The dark side of choice: When choice impairs social welfare. *Journal of Public Policy & Marketing, 25*, 24–38.
- Carstensen, L., Fung, H., & Charles, S. (2003). Socioemotional selectivity theory and the regulation of emotion in the second half of life. *Motivation and Emotion, 27*, 103–123.
- Carstensen, L. L., & Mikels, J. A. (2005). At the intersection of emotion and cognition: Aging and the positivity effect. *Current Directions in Psychological Science, 14*, 117–121.
- Finucane, M. L., Slovic, P., Hibbard, J. H., Peters, E., Mertz, C. K., & MacGregor, D. G. (2002). Aging and decision-making competence: An analysis of comprehension and consistency skills in older versus younger adults considering health-plan options. *Journal of Behavioral Decision Making, 15*, 441–464.
- Henry J. Kaiser Family Foundation. (2006). *The Medicare prescription drug benefit: An updated fact sheet* (KFF Publication No. 7044–05). Retrieved October 21, 2007, from <http://www.kff.org/medicare/upload/7044-05.pdf>
- Iyengar, S. S., & Lepper, M. (2000). When choice is demotivating: Can one desire too much of a good thing? *Journal of Personality and Social Psychology, 79*, 995–1006.
- Johnson, M. M. S. (1990). Age differences in decision making: A process methodology for examining strategic information processing. *Journal of Gerontology: Psychological Sciences, 45*, 75–78.
- Löckenhoff, C. E., & Carstensen, L. L. (2007). Aging, emotion, and health-related decision strategies: Motivational manipulations can reduce age differences. *Psychology and Aging, 22*, 134–146.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98*, 224–253.
- Mather, M. (2006). A review of decision making processes: Weighing the risks and benefits of aging. In L. L. Carstensen & C. R. Hartel (Eds.), *When I'm 64: Committee on aging frontiers in social psychology*,

- personality, and adult developmental psychology*, (pp. 145–173). Washington, DC: National Academies Press.
- Mather, M., Knight, M., & McCaffrey, M. (2005). The allure of the alignable: Younger and older adults' false memories of choice features. *Journal of Experimental Psychology: General*, *134*, 38–51.
- Medicare Part D: Tyranny of choice [Editorial]. (2006, July 30). *Oakland Tribune*. Retrieved October 21, 2007 from http://findarticles.com/p/articles/mi_qn4176/is_20060730/ai_n16654565
- Mikels, J. A., Larkin, G. R., Reuter-Lorenz, P. A., & Carstensen, L. L. (2005). Divergent trajectories in the aging mind: Changes in working memory for affective versus visual information with age. *Psychology and Aging*, *20*, 542–553.
- Payne, J. W., Bettman, J. R., & Johnson, E. J. (1993). The use of multiple strategies in judgment and choice. In N. J. Castellan (Ed.), *Individual and group decision making* (pp. 19–39). Mahwah, NJ: Erlbaum.
- Schwartz, B. (2000). Self-determination: The tyranny of freedom. *American Psychologist*, *55*, 79–88.
- Schwartz, B. (2004). *The paradox of choice: Why more is less*. New York: Ecco.
- Simon, K. I. (2007). *Do you get what you pay for? The relationship between premiums and benefits in Medicare prescription drug plans*. Unpublished manuscript, Cornell University.
- Zwahr, M. D., Park, D. C., & Shifren, K. (1999). Judgments about estrogen replacement therapy: The role of age, cognitive abilities, and beliefs. *Psychology and Aging*, *14*, 179–191.

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