

# Older Adults Place Lower Value on Choice Relative to Young Adults

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**Choice is highly valued in modern society, from the supermarket to the hospital; however, it remains unknown whether older and younger adults place the same value on increased choice. The current investigation tested whether 53 older (*M* age = 75.44 years) versus 53 younger adults (*M* age = 19.58 years) placed lower value on increased choice by examining the monetary amounts they were willing to pay for increased prescription drug coverage options—important given the recently implemented Medicare prescription drug program. Results indicate that older adults placed lower value on increasing choice sets relative to younger adults, who placed progressively higher value on increasingly larger choice sets. These results are discussed regarding their implications for theory and policy.**

**Key Words:** Aging—Choice—Decision making—Value—Willingness to pay.

INDIVIDUALS face an increasing number of options for most daily decisions—from purchasing jam and cars to choosing doctors and health care plans (e.g., Botti & Iyengar, 2006; Schwartz, 2004). The proliferation of choice is particularly noteworthy in health care domains as a result of increased emphasis on patients' autonomy, a move away from paternalistic physician-dominated decisions, and the introduction of more private sector involvement and competition (Botti & Iyengar, 2006). Given that health care needs increase with age and that increasingly complex health care decisions can be especially daunting for older adults (Finucane et al., 2002; Gazmararian et al., 1999; Hibbard, Slovic, Peters, Finucane, & Tusler, 2001), it would be prudent to consider how older versus younger adults approach this proliferation of choice. Although older individuals show a trend of decision avoidance (for a review, see Mather, 2006) and report preferences for fewer options relative to their younger counterparts (Reed, Mikels, & Simon, 2008), would they *place lower value* on increased options? The present investigation sought to investigate this issue by assessing the monetary amount individuals were willing to pay for increased choice.

The notion that increased choice engenders more desirable options and greater decision satisfaction is supported by a large body of economic and psychological theory and research (for reviews see Botti & Iyengar, 2006; Iyengar & Lepper, 2000; Schwartz, 2004). However, the benefits of increased choice are not without limits. Beyond a certain number of competitors, increasing the number of options available does not lead to further substantial reductions in price (Bresnahan & Reiss, 1991). Moreover, increased choice has a psychological dark side—it may lead to impaired motivation to choose and decreased satisfaction and confidence (see Botti & Iyengar, 2006; Iyengar & Lepper,

2000). Botti and Iyengar (2006) and Schwartz (2004) suggest that such “choice overload” may result from complex decisions exceeding the cognitive capacity of individuals and/or increasing the likelihood of experiencing negative affect (i.e., regret). Given various aspects of older adults' decreased cognitive capacity but increased emphasis on emotion regulation (see Carstensen, Mikels, & Mather, 2006; Peters, Hess, Vastfjall, & Auman, 2007), choice overload may have differential impact on older versus younger adults. Indeed, recent findings suggest that older adults do desire less choice than their younger counterparts. For instance, when asked for their preferred number of options for health care and everyday decisions, older adults report desiring on average half the number of options relative to younger adults (Reed et al., 2008). In addition, older adults choose less variety (choose from fewer options) for items to be consumed in the future versus immediately, whereas younger adults choose equally high levels of variety for both temporal contexts (Novak & Mather, 2007). Nonetheless, these prior open-ended studies of choice do not quantify the relationship between aging and increasing choice that exceeds preferences. The current study fills this void by quantifying the value that individuals place on increased choice.

One important domain in which concerns regarding aging and increased choice have been expressed is that of contemporary Medicare policy approaches (see e.g., Hibbard et al., 2001). Of particular relevance is the recently introduced Medicare prescription drug program (Part D). At its inception in 2006, the Medicare Part D program offered a choice among dozens of highly subsidized drug coverage plans to the 43 million older adults who were enrolled in Medicare. The average number of options in a region was 42 initially and increased to 55 choices in the following year (Simon, 2007). But many eligible older individuals (nearly

25%) had failed to enroll when it was initially made available (Winter et al., 2006), presumably in part due to the excessive complexity of choices inherent in the program (Thaler & Sunstein, 2008).

The amount of choice available to older adults through Medicare Part D appears to exceed their preferences (e.g., Reed et al., 2008). However, previous research examined explicit preferences for choice in an unconstrained manner that did not evaluate how older adults react to high levels of choice. To investigate age differences in choice valuation, we utilized a willingness to pay (WTP) paradigm, which is commonly used to directly quantify the value that individuals assign to various alternatives and has become increasingly used in health care domains (see, e.g., Cawley, 2008; Diener, O'Brien, & Gafni, 1998; Hsee & Leclerc, 1998; Klose, 1999; Smith, 2000). Given our interdisciplinary aim of assessing the value of increased choice in an applied consumer domain (i.e., health care), WTP represented the most direct measure with which to concretely quantify value—in monetary terms—that could be extended to inform policy. Although WTP is a commonly used and reliable method, it is obtained from a hypothetical scenario and not deduced from actual market behavior (see, e.g., Carson, Flores, & Meade, 2001; Diamond & Hausman, 1994). However, this method is fully sufficient for the present purpose of assessing the psychological value of increased choice by asking individuals to indicate how much money they would be willing to pay for choice sets of varying size for Medicare Part D plans. Our prediction was that older individuals would express lower WTP for increased choice than young adults.

## MATERIALS AND METHODS

### Participants

Fifty-three undergraduates at Cornell University ( $M$  age = 19.58 years,  $SD = 2.30$ ; 62% female) participated for course credit. Fifty-three older adults ( $M$  age = 75.44 years,  $SD = 10.54$ ; 68% female) recruited from two senior centers in New York City received \$10 for participation. There was no difference in years of education between younger ( $M = 14.00$  years,  $SD = 1.02$ ) and older adults ( $M = 14.18$  years,  $SD = 2.89$ );  $t(104) = 0.67$ , nonsignificant.

### Materials and Procedure

Participants completed a demographic questionnaire and a WTP questionnaire that assessed how much money they were willing to pay for options specifically framed with respect to Medicare Part D. Participants were instructed to imagine that they could have the opportunity to select a drug plan from an array of options after paying a one-time fee. Participants indicated the amount of money (in dollars) that they would be willing to pay to select from choice sets containing 5, 10, 25, 55 prescription drug plans. We did not

state whether a larger set indicated different quality choices, nor how they would select from within the choice set. As a point of comparison, we also included two “no-choice” options, in which (a) the best of 55 plans is chosen for the participant and (b) a plan is randomly chosen from 55 plans. The choice set sizes were chosen to roughly mirror real scenarios for Medicare Part D; “55 options” corresponded to the realistic number of options available in the New York region at the time; 25, 10, and 5 are possible numbers that policy might consider in the future (Rice, Cummings, & Kao, 2008); “no choice with random selection” corresponds to the enrollment method for low-income subsidy autoenrollees (who did not select a plan) in most states; “no choice with the best chosen” option corresponds to low-income subsidy autoenrollment in other states—for example, Maine.

## RESULTS

To test our hypothesis that older adults would value increased choice less than young adults, we conducted a repeated measures analysis of variance on the dollar amounts reported with the within-subjects factor of choice amount (5, 10, 25, 55 options) and the between-subject factor of age group (young, old).

As expected, there was a main effect of age group; older adults placed lower value on choice (\$39.67,  $SD = \$69.13$ ) relative to the young adults (\$85.55,  $SD = \$99.48$ ),  $F(1, 104) = 7.60$ ,  $p < .01$ ,  $\eta_p^2 = .07$ . There was a significant main effect of choice amount,  $F(3, 102) = 12.95$ ,  $p < .001$ ,  $\eta_p^2 = .28$ ; larger choice sets were valued higher than smaller choice sets (5 options = \$38.34, 10 options = \$48.94, 25 options = \$67.92, 55 options = \$95.24) as revealed by a significant linear contrast,  $F(1, 104) = 36.41$ ,  $p < .001$ ,  $\eta_p^2 = .26$ . Central to our predictions, there was a choice amount by age group interaction (Figure 1),  $F(3, 102) = 7.03$ ,  $p < .001$ ,  $\eta_p^2 = .17$ . Independent-sample  $t$  tests revealed that the groups differed in the value placed on number of options for 25 and 55,  $t(104) = 3.25$ ,  $p < .005$ , and  $t(104) = 3.57$ ,  $p < .005$ , respectively. Further, paired-sample  $t$  tests showed that young adults were willing to pay significantly more for each increase in number of options (all  $t(52) > 4.5$ , all  $p$  values  $< .001$ ), whereas older adults were willing to pay more for only an increase from 25 to 55 options,  $t(52) = 3.25$ ,  $p < .005$ .

To control for experience with Medicare Part D, we examined WTP among older adults enrolled versus not enrolled in Medicare Part D. There was no difference between those enrolled in Medicare Part D ( $N = 24$ ) versus those not enrolled ( $N = 29$ ). Additionally, to examine possible age differences within the older adult group, we compared the “young” older adults to the “old” older adults based on an age median split and did not find any differences between these sub groups.

As described earlier, we also included two “no-choice” options. Whereas younger and older adults did not differ in

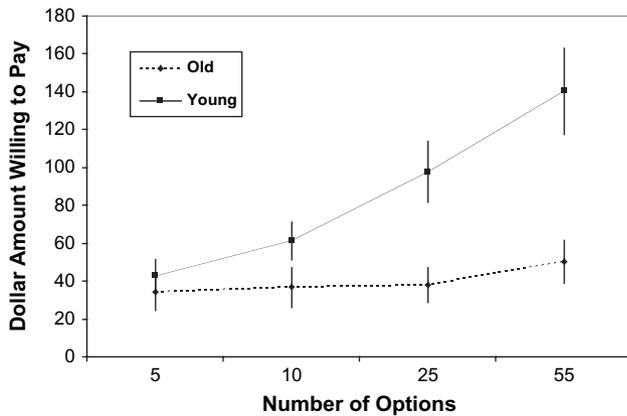


Figure 1. The dollar amounts that older and younger adults were willing to pay for increased numbers of options.

the low value they placed on a randomly chosen plan (\$14.53,  $SD = \$37.23$  and \$31.17,  $SD = \$83.87$ , respectively),  $t(104) = 1.32, p > .19$ , the younger adults did place higher value relative to the older adults on the best plan being chosen for them (\$64.53,  $SD = \$83.32$  and \$26.74,  $SD = \$66.39$ , respectively),  $t(104) = 2.58, p < .05$ .

## DISCUSSION

We hypothesized that older adults would be willing to pay less than younger adults for increased choice among prescription drug plans and found precisely that; younger adults were willing to pay more for all increases in the number of options, whereas older adults placed higher value on only the largest set (55 options). Though age differences in WTP were minimal for relatively small choice sets, they were robust at higher levels of choice. Thus, these data suggest that older adults are willing to pay less for large increases in choice than their younger counterparts.

These results hold important policy implications with respect to the government-sponsored Medicare Part D program. Specifically, our finding that older adults do not place high value on increased choice among prescription drug plans is important in light of the large number of options currently being offered to them. Although increased options should theoretically engender lower costs to the beneficiary via market competition (Botti & Iyengar, 2006), at 55 options, the costs may outweigh the benefits for older adults. Although the current results document a notable age difference in the value individuals place on increased choice, the underlying mechanisms for this difference remain opaque.

For instance, the presumed cognitive burden associated with increased choice may play a role given age-related decline in cognitive functions such as speed of processing and working memory (for a review, see, e.g., Carstensen, Mikels, & Mather, 2006). Alternatively, older adults may value choice less due to increased emphasis on emotion

regulation in later life. In particular, as individuals grow older and their future time perspective decreases, they become focused on emotion regulation—optimizing positive affect and minimizing negative affect (see, e.g., Carstensen et al., 2006). As the number of options increase, so does the potential for regret and dissatisfaction (Schwartz, 2004). Thus, older adults may place lower value on increased choice as a means of preventing potential negative affect.

Whereas the specific focus of our study is a strength with respect to real-world implications, it also poses a limitation regarding generalizability to age-related changes in the value of choice across domains. For instance, given motivational changes associated with age (see, e.g., Carstensen et al., 2006), it is possible that older adults would place a higher value on increased choice for domains related to social or emotionally gratifying goals and those without long-term consequences—such as choosing a restaurant. Additionally, these age-related changes may be due to changes in time perspective (see, e.g., Carstensen et al., 2006). As such, would younger adults with limited time perspectives also value increased choice less? Finally, perhaps older adults have differential anchoring-and-adjustment functions—and they may respond differently to increases in choice for the reasons outlined previously. Although the current results do not address mechanisms, they open an exciting area of investigation that has many promising avenues of future inquiry.

As a final point of consideration, the current study may reflect generational differences regarding monetary value. That is, given differences in the sociocultural experiences that older adults have had relative to younger adults, perhaps, older adults generally assign lower monetary value to choices generally. However, older relative to younger adults place the same value on small amounts of choice (i.e., 5 and 10 options). This pattern suggests that although older adults do not place high value on large amounts of choice, they may still value choice autonomy.

In sum, the current investigation makes clear that older adults do not value increased choice as much as their younger counterparts. Although the developmental mechanisms remain opaque, the policy implications are clear. Whereas older Americans are offered on average 55 drug plan options with Medicare Part D, they do not place high value on such high levels of choice.

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