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Aging and choice: Applications to Medicare Part D

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Abstract

We examined choice behavior in younger versus older adults using a medical decision-making task similar to Medicare Part D. The study was designed to assess age differences in choice processes in general and specifically designed to examine the effect of choice set size on performance. Data are drawn from a larger study on choice and aging, in which ninety-six younger adults (ages 18–64) and 96 older adults (ages 65–91) selected a prescription drug plan from either 6 or 24 different options. As hypothesized, choice set size was a significant predictor of individuals' ability to choose the best plan. Participants who were presented with 24 plans were less likely to choose the correct prescription drug plan. Age did not have a negative effect on decision performance; however numeracy and speed of processing significantly affected performance across groups. Older adults were more likely to be characterized as satisficers on a decision personality measure, but this categorization did not predict performance on the choice task.

Keywords: age differences, satisficing, maximizing, Medicare Part D, decision making, choice.

1 Introduction

In January 2006, the Medicare Modernization Act (known as Medicare Part D) came into effect in the U.S., offering millions of Medicare beneficiaries the opportunity to purchase insurance coverage to help them pay for their prescription drugs. Unlike other health benefits provided by Medicare, Part D benefits are not provided directly by the government, but rather by private insurance companies. That is, older adults buy insurance directly from insurance companies while the government oversees certain aspects of the program. One consequence of this design is the large number of insurance plans available for beneficiaries. In most states older adults have more than 53 insurance plans to choose from. (Pennsylvania and West Virginia have the most with 63 plans; `www.medicare.gov`, 2008.) While older adults have reported satisfaction with the program (Kaiser Family Foundation, 2007), they have also deemed the program to be too complicated. Indeed, when the Kaiser Family Foundation (2006) asked doctors, pharmacists and older adults what they thought about the Medicare D program, 92% of doctors, 91% of pharmacists and 73% of older adults judged it to be too complicated. One might wonder, therefore, about the usefulness of offering older adults such a large array of choice.

Economist and psychologist have long cherished the idea of choice. Recent research, however, has come to question this basic assumption, arguing that too much choice can reduce the quality of the decision and the satisfaction with the decision (e.g., Iyengar & Lepper, 2000; Iyengar & Jiang, 2005; Schwartz et al., 2002). As the field of cognitive aging has documented declines in speed of processing and executive functioning, which could potentially affect older adults' ability to process information and make decisions (e.g., Parks & Schwarz, 1999), we set out to study how the natural aging process may interact with choice set size and the implications for decision quality. Medicare Part D was used as the basis of the task because of its current relevance in the real world decision-making of older adults. Specifically, the study examined the relationship between the number of drug plan choices available and the effect of age on individuals' ability to make objective and subjective decisions. In addition, we examined the effect of decision-making style, cognitive abilities (speed of processing), and numeracy in choosing a prescription drug plan from few or many options.

1.1 Choice set size

The idea that more choice is preferable to less choice has been advanced by economists and psychologists alike

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(e.g., Baard, Deci, & Ryan, 2004; Deci & Ryan, 1985; Deci & Ryan, 2000; Ryan, 2004; Kasser & Ryan, 1999). Other researchers, however, have argued that having a large number of options may lead to negative consequences, such as increased sense of regret and dissatisfaction with one's choice (e.g., Iyengar & Lepper, 2000; Schwartz, Ward, Monterosso, Lyubomirsky, White, & Lehman, 2002; Iyengar & Jiang, 2005). For example, Iyengar and Lepper have demonstrated that offering a larger choice set — whether of jam, chocolate of extra exam questions — can reduced consumers' likelihood of purchasing the product (jam), satisfaction with the product (chocolate), and grades (essays).

Iyengar, Huberman, & Jiang (2004) have extended this line of thinking to the financial domain, mainly 401(k) retirement plans. Analyzing data of close to 800,000 employees, the authors investigated whether the number of retirement plans available — ranging between 2 and 69 — affected an employee's decision to join a 401(k) plan and the type of plan they joined. After controlling for a number of factors, including wages, age, gender, and length of employment, the authors found a negative relationship between the number of choices available and the likelihood of an employee joining a plan. Indeed, Iyengar et al. (2004) found that every increase of 10 retirement plans led to a decrease in participation by 1.5 to 2 percent.

Iyengar and colleagues' work suggest that offering too many choices can have a detrimental effect on decision-making, in term of both objective and subjective dimensions. It also argues that having too many options can decrease motivation and satisfaction, while increasing a sense of regret. Yet, older adults face a large range of insurance plans from which to choose, rendering the Medicare Part D program as too complicated for its intended consumers. Indeed, a number of surveys have found that the majority of older adults deem the program to be too complicated (e.g., Kaiser Family Foundation, 2006). Other studies (Cummings, Rice, & Hanoch, 2009) have found that the majority of older adults judge the program to be too complicated and to offer too many choices, and would rather have a single plan offered by the government. These findings might not surprise aging researchers, who have long been interested in the relationship between age and cognitive abilities.

1.2 Decision-making and Aging

Data regarding age differences on decision making tasks has been mixed, with some work demonstrating no age differences in decision-making abilities (e.g., Wood, Busemeyer, Koling, Cox, & Davis, 2005; Meyer, Russo, & Talbot, 1995). A recent review concludes that older adults often come to similar decisions as younger adults, although they may be more likely to avoid making decisions and seek less information when making decisions (Mather, 2006). The summary indicates there is evidence that older adults do not show declines in decision-making abilities, but may use different strategies and cognitive processes in their decision-making. However, other researchers have reported changes in decision-making among older adults. Hibbard, Slovic, Peters, Finucane, and Tusler (2001) examined decision-making in the medical domain using an investigation of participants' understanding of health care plans. Participants were presented with text, tables, and charts about different health care plans. Significant age effects emerged, and older individuals were found to be three times more likely to make errors on tasks than younger adults (9 percent and 25 percent, respectively).

In another study, Finucane, Mertz, Slovic, and Schmidt (2005) investigated the relationship between age and competence by increasing task complexity of health, financial, and nutritional information. A total of 340 participants completed various tasks and surveys asking about personal variables that may affect decision-making competence (e.g., social, health, cognitive, and attitudinal measures). Individuals performed significantly better on simple rather than complex tasks. Participants also made fewer errors on straightforward (e.g., what is the lowest co-payment?) rather than inferential questions (e.g., which HMO offers best treatment quality?). Older adults had more comprehension errors as complexity increased in health, financial, and nutritional information. However, even though older adults performed worse as a group in this condition, there was not a significant age-by-complexity interaction with this task. In accordance to the authors' Person-Task Fit (PTF), social variables, health, cognitive skills, and attitudes accounted for much variance in older adults' performance. This framework demands that individuals' decision-making be put into the context of personal characteristics and task demands (e.g., experience, age, culture). This is most important for older adults' decision-making and the ability of service providers and policy makers to predict good and poor decision-making situations (Finucane & Lees, 2005).

In summary, although some research on decision-making and aging has not found differences in overall outcome, health related research has reported poorer performance with older adults,

1.3 Individual Differences and Decision-Making

1.3.1 Numeracy

Numeracy, or the ability to understand and process numerical information, has recently been reported to play a critical role in performance on a wide range of decision-

making tasks (e.g., Peters et al., 2006). Indeed, a growing body of evidence has argued that numeracy levels play a key role in a host of medical related decisions (Ancker & Kaufman 2007; Lipkus, Samsa, & Rimer, 2001; Woloshin, Schwartz, Black & Welch, 1999). In a recent review, Nelson, Reyna, Fagerlin, Lipkus and Peters (2008) summarized this idea well: "Low numeracy is pervasive and constrains informed patient choice... impairs risk communication, and affects medical outcome" (p. 261). Observed differences in numeracy, however, are not generally attributable to differences in general intelligence. This work is especially relevant to older adults making insurance choices that require the understanding and integration of numeric information (Peters et al., 2007).

1.3.2 Decision-making style: Maximizers versus satisficers

There are instances when selecting a prescription drug plan may depend on the criteria the individual uses when making a decision. Schwartz and colleagues (2002) used Simon's (1955) concepts of maximizing and satisficing to describe individual's decision-making and search style. Maximizers are characterized as individuals who constantly seek the best possible choice and will not settle for anything but the best. In contrast, satisficers will seek out options only until their criteria have been met and do not spend time thinking about unknown alternatives. Individuals are not just one type or the other but may shift between the two decision-making styles depending on the type of task they are facing. It is possible, therefore, that some Medicare beneficiaries (i.e., satisficers) will fare better when faced with an environment that is rich in choice.

Although there is little research about older adults' decision styles, research with younger adults has found that maximizers tend to optimize their choices by examining and analyzing all the options available to them with the aim of picking the best option possible (Schwartz, 2000; Schwartz et al., 2002; Schwartz, 2005). Since maximizers constantly look to optimize their decision, they may actually be worse off with an added amount of options. As satisficers tend to choose according to predetermined criteria, they might not be affected as much by an increase in choice size. While maximizers and satisficers tend to utilize different search and decision styles, one might wonder whether these differences affect the quality of their decision and their level of satisfaction with their decision (Schwartz, 2004). That is, do maximizers make (objectively) better decisions, and do these translate to greater satisfaction with their decision?

In a series of studies, Schwartz (2000; see also Iyengar, Wells, & Schwartz 2006; Parker, de Bruin, & Fischhoff, 2007) identified the decision and search characteristics of maximizers and satisficers. Those who scored high on the maximizing scale also reported high levels of regret, social comparison, product comparison and perfectionism. Schwartz and his colleagues argued that there may be a maximizing may be related to depression through the tendency to experience regret. Maximizers may regret decisions they made if they were unable to analyze all the options or later discovered a better option. This stands in contrasts to satisficers who, having made a decision that matched their aspiration level, do not tend to experience regret. Maximizing was related negatively to life satisfaction, self-esteem, optimism, and happiness in these studies. Again, this relationship was partially mediated by feelings of regret (Schwartz, 2000). Note, however, that Diab, Gillespie, and Highhouse (2008) found no relationship between maximizing tendency and life satisfaction, using what they claimed was an improved measure of maximizing.

Researchers have largely failed to extend this line of work to include older adults (Parks & Schwarz, 1999). Much of what is known about decision-making in older adults has been pieced together using the knowledge of the processes required for efficient decision-making and the quality of those processes in older adults. Even less is known how decisions style, such as maximizing versus satisficing, might be affected by age.

1.4 Current study

The current study aimed to study how age (young versus old) affects decision quality in relationship to different choice size (6 versus 24 options) on a medical decision-making task designed to simulate Medicare Part D. It was hypothesized that participants, on average, would do worse (on an objective criterion) when faced with 24 rather than six drug insurance plans. It was also predicted that older adults would perform worse than their younger counterparts as complexity increased. In order to control for the influence of speed of processing and numeracy on choice performance, both were included as covariates.

Secondary analyses were done to examine personality style and choice performance and difficulty. It was predicted that, because of changes in cognitive functioning, personality style would shift with age so that, as age increased, tendency to maximize would decrease. It was further predict that individuals who scored lower on the maximizing scale (satisficers) would indicate less perceived difficulty when choosing from a large choice set than participants who score high on the maximizing scale (maximizers).

Table 1: Participant demographics (N=192).

	N	Age (SD)	Education (SD)
Younger	96	33.6 (13.6)	4.02 (1.0)
Older	96	75.7 (6.7)	4.02 (1.2)
Total	192	54.2 (24.1)	4.02 (1.1)

Education coded 1 = less than high school, 2 = high school graduate, 3 = some college/associate's degree, 4 = bachelor's degree, 5 = master's degree.

2 Method

This study was part of a larger research project entitled "Manacled competition: Limiting health insurance choices for the elderly." The aim of the project was to investigate how people make decisions when choosing insurance for prescription drug coverage and insurance for long-term care.

2.1 Participants

One hundred and ninety-two healthy men and women from the greater Los Angeles area were recruited to participate. Half of the participants were aged 65 and older and half were younger adults (aged 18–64). Older participants were recruited from an already existing senior participant pool, as well as advertisements at senior centers and in local newspapers. Individuals from the participant pool received phone calls informing them of the study and asking them to participate. Younger participants were recruited through flyers posted at community centers, colleges, and libraries and advertisements in local newspapers. Interested individuals who indicated no major physical concerns or disabilities, such as Alzheimer's disease or any learning challenges, were asked to schedule a session.

All participants received $10 per hour spent taking part in the study. The median time of completion was about 45 minutes. None of the older participants failed to attain the minimum cognitive screening test score (26 or greater on the Folstein Mini-Mental State Exam, MMSE, Folstein 1975) and so all potential participants were eligible to take part in the study. Level of education was equivalent for both groups (mean education = 4.02; with a "4" approximately equal to completion of bachelor's degree). The study sample was composed of 96 older adults aged 65 and up (mean age = 75.7) and 96 younger adults aged 18 to 64 (mean age = 33.6) for a total of 192 participants (see Table 1). Hence, 48 participants of each age group received the task with six plans from which to choose and 48 of each age group received the task with 24 choices.

2.2 Materials/measures

1. Cognitive screen: All older participants were tested using the MMSE to confirm that they were cognitively intact. A minimum score of 26 out of the possible 30 was required to have been eligible for participation in the study (Mean = 29.4; range = 26–30).

2. Demographic questionnaire: Participant age, education, ethnicity, income, insurance enrollment, and marital status were recorded.

3. Numeracy scale (Lipkus, Samsa, & Rimer, 2001): an 11-item measure of basic mathematical understanding that was modified from the original version by Peters et al. (2006). Questions on the scale presented participants with various situations having to do with probabilities (e.g., In the ACME PUBLISHING SWEEPSTAKES, the chance of winning a car is 1 in 1,000. What percent of tickets of ACME PUBLISHING SWEEPSTAKES win a car?).

4. Maximizing Scale (Schwartz et al., 2002): A 13-item maximizing scale with a range index of 13–91 was used to measure decision-making personality style, with a high score being indicative of a tendency to maximize versus satisfice. The survey questioned participants on decision behavior (e.g., "I often find it difficult to shop for a gift for a friend", "Whenever I'm faced with a choice, I try to imagine what all the other possibilities are, even ones that aren't present at the moment") and participants circled how true the statement was for them on a seven-point Likert scale (1 = completely disagree, 7 = completely agree). Maximizing was used in secondary analyses as a covariate. Nenkov et al. (2008) deemed this original 13-item scale to be reasonably consistent (mean Cronbach's α = .70) and valid (.28 validity index).

5. All participants took the pen-and-paper digit comparison task modified by Finucane and colleagues to test speed of processing (2005; Hedden et al., 2002). Digit comparison is a timed, three section task in which participants make same-different judgments concerning different length strings of numbers (three, six, or nine). Individuals got 45 seconds per section to complete as many string judgments as they could.

6. Drug Plan Choice task and Simulated Medicare Part D Material: The drug plan materials consisted of a table that included three variables along the top and 6 versus 24 plans from which to choose. In addition, participants were asked to indicate how difficult it was for them to choose a plan on a five-point Likert scale (1 = not hard at all, 5 = very hard) as a measure of perceived difficulty (see Appendix A).

Although older adults who use the Medicare prescription drug plan finder (medicare.gov) encounter seven criteria for each plan (plan name, providing company, annual cost, monthly premium, annual deductible, drug cost

Table 2: Examples of material in Medicare web site and in this study.

Example of material in Medicare website

Plan name and ID	Company name	Coverage in the Gap	Monthly drug premium	Annual deductable	Drug cost sharing	Summary of rating
First health Secure	First Health part D	No gap Coverage	$18.30	$175.00	28 %	***

Material used in the study

Company	Monthly Drug Premium	Distance to the closest pharmacy	Average monthly cost sharing	Place an X next to the plan selected
A	$37	Close	$35	

sharing, and coverage in the gap), we simplified the task by including only three factors (monthly drug premium, drug cost sharing, and an addition of nearest pharmacy). We did not include plan name because we would not be able to control for brand name recognition, and coverage in the gap has proven to be a complex concept.

The worst plan of the choice set was rated a "1" and was the worst across all criteria (highest combined monthly premium and cost-share and far from the nearest pharmacy). Only one plan was rated a "3" and only one was rated a "1". All other plans were rated a "2" as potential plans for those who would "satisfy" in the decision-making process. Thus, because the best plan was the best all-around choice, we do not feel as though people would choose an alternative plan because of preferences. Finally, to determine if our ratings (Best, Worst, OK) were apparent to study participants, we pilot tested both tables (6 versus 24) with 20 participants (10 young and 10 older). These ratings were consistent across age groups. In summary, for participants to choose the best plan, they would need to calculate each plans monthly premium plus the average monthly cost sharing in order to get at the plan's total cost.

Table 2 shows information on one plan from the Medicare web site versus our simplified material:

2.3 Procedure

Participants were tested individually at Scripps College or at a local senior center in Claremont, California. Individuals were given a short introduction to familiarize them with the tasks that they would be asked to complete and then reminded that they were allowed to take a break or terminate the session at any time.

Participants were randomly assigned to one of two groups. Half the participants received six plans from which to choose and the other half was presented with 24 options. Participants were also given a default plan to which they were currently subscribed and a glossary page of terms used throughout the experiment in case any of the terms were unfamiliar. They were directed to assume that they were currently signed up for a prescription drug plan and were given information about the monthly premium, co-payment, and the distance of the nearest pharmacy. They were also told that they were generally happy with this plan but suspected that there may have been a better one available.

Participants were told to take as much time as needed to analyze the table provided and then answer the questions on the following page. Both conditions showed the default plan described in the scenario as first in the table and was labeled "current plan". The task required participants to compare across three variables and select either the best plan available from the six or 24 options or stay with the current plan. Participants then filled out the demographics page, and lastly completed the Numeracy, Maximizing Scale, and Digits comparison scales.

Design: The study employed a 2 (six versus 24 choices) x 2 (age: young verses old) factorial, between-subjects design. The dependent variables were responses to questions regarding performance, choice preference and satisfaction. Secondary analyses examined the relationship between age, choice, and personality style.

3 Results

Quality of choice: The researchers initially rated every plan as a 3 (best choice), 2 (okay choice), or 1 (worst choice), providing a score range from 1 to 3. Participants could receive a score of 1 to 3 depending on the plan chosen. None of the participants marked the worst plan in any of the conditions. Three participants failed to mark an answer for the perceived difficulty of the choice task (n = 189).

Table 3: Summary of ANCOVA Results on Choice Quality (N = 192).

Step	Variable	F	P	Partial η^2	Observed power
1	Choice size	5.279	.023	.027	.628
2	Age	2.346	.127	.332	.332
3	Choice size*Age	0.438	.252	.007	.208
4	Numeracy	14.336	<.001	.071	.965
5	Digit comparison	10.615	.001	.054	.900

Table 4: Summary of t test results on numeracy score and digit comparison score of young and old adults.

DV	Age	Mean	S.D.	t	p
Numeracy score	Young	9.39	1.860	6.65	0.00
	Old	7.24	2.554		
Digit comparison	Young	71.53	12.197	9.95	0.00
	Old	53.83	12.358		

Table 5: Mean choice scores (and S.D.) by age and choice array size. A score of 3 is the best choice.

Age group	Number of plans	Mean	S.D.	N
Young adults	6 plans	2.96	.202	48
	24 plans	2.77	.425	48
	Total	2.86	.344	96
Older adults	6 plans	2.81	.394	48
	24 plans	2.75	.438	48
	Total	2.78	.416	96
Total	6 plans	2.89	.320	96
	24 plans	2.76	.429	96
	Total	2.82	.383	192

The manipulation of choice set size was successful. See Table 5 for means. Using a two-way analysis of variance (ANOVA), a main effect for choice set size was observed, such that, overall, participants were less likely to choose the best plan when faced with 24 choices rather than six (F (1, 191) = 5.279, p = .023). Contrary to expectations there were no age effects on quality of choice (F (1, 190) = 2.346, p = .127). The effect of set size did not vary as a function of age: the interaction between age and choice was not significant (F(1,183 =1.320, p=.127).[1]

When digit comparison was included as a covariate, it indicated that processing speed significantly affected performance, accounting for a significant amount of the overall variance (F (1, 191) = 10.615, p = .001). When scores on the numeracy scale were included, numeracy accounted for a significant amount of the overall variance (F (1, 191) = 14.336, p < .001) indicating that numeric ability was a strong predictor of overall performance. Age remained non-significant.

In summary, the results of the ANCOVA indicate that individuals perform best when presented with fewer choices.

Highly numerate individuals also performed significantly better than less numerate participants. Speed of processing, as assessed by the digit comparison task, was a significant predictor, suggesting that participants with faster speed of processing perform better on this task. The effect of age was not significant.

Perceived difficulty: A second 2 (age) x 2 (choice size) ANOVA was done on perceived difficulty of the task. Consistent with hypotheses, across groups, individuals in the larger choice size condition rated the task to be more difficult than those assigned the smaller choice size (F (1, 188) = 3.692, p = .056). However, perceived difficulty of the task did not differ significantly by age (F (1, 186) = .560, p = .455). The interaction between choice set size and age was not significant (F (1, 185) = .560, p = .455). Maximizing tendency did not account for a significant amount of the variance in perceived difficulty(F (1, 188) = .179, p = .673).

Decision-making style: As predicted, as age increased, scores on the Maximizing scale decreased, so that older adults were more likely to satisfice than younger adults, (r = -.264, p < .01).

Choice Size: In order to test the impact of decision style on choice, a 2 (age) by 2 (choice size) ANCOVA was done with maximizing score added as a covariate. Decision-making personality type did not account for a significant amount of variance of the task performance (F (1, 191) = .300, p = ns.).

Age differences: Younger adults performed better than older adults on digit comparison (t(191) = 9.95, p = 0.00), and numeracy score (t(191) = 6.65, p = 0.00). This result suggests that the lack of age differences in other measures cannot be explained in terms of the older group being more generally able, relative to other older people, than the younger group.

[1]The effect of set size could result from guessing (or some similar random process), e.g., guessing after narrowing down the set of options by a constant proportion. Still, the same guessing mechanisms could lead to better choices with smaller set sizes in the real situation that our task is meant to simulate.

4 Discussion

Overall, participants performed worse when presented with 24 prescription drug plans instead of the more manageable six options. These findings are consistent with results from Iyengar and Lepper (2000) and Iyengar et al. (2004) and suggest that individuals have a more difficult time choosing the best option when faced with large number of prescription drug plans than when faced with few. Indeed, as participants with more choice were less likely to find the best choice available to them, our results counter earlier thinking that the more choice individuals have the better off the decision-making process. The observed relationship between choice size and quality of decision raises major concerns regarding the current Medicare format.

No main effect was found for age and performance in the current study. Specifically, older adults' ability to choose the best plan was not significantly worse than younger adults' ability to choose the best plan. Numeracy and processing speed were strong predictors of how well participants performed.

In addition, the results of the study suggest that as age increases, the tendency to maximize decreases, consistent with predictions. However, decision-making style was not a predictor of performance on this particular medical decision-making task.

The largest number of choices offered in this project was 24 plans, a considerably smaller array size than the average of 53 prescription drug plans offered to an everyday beneficiary (`www.medicare.gov`, 2008). The significant difference observed in the ability to choose the best plan between the two different array sizes in this study supports the claim that Medicare beneficiaries are currently being offered too many choices. Such an occurrence would not only be detrimental to decision-making but may cost older adults thousands of dollars and the inability to find necessary services that may be available to them.

Such a concern may be even more noteworthy given that individual characteristics were found to play a significant role in decision-making quality. Numeracy was the strongest predictor of performance in the current study. This suggests that in situations where individuals are asked to make decisions based on numerical information, prior experiences and feelings about their mathematical skills may highly influence their ability to make a good decision. This is consistent with the findings of Peters et al. (2006) regarding numeracy and decision-making. Participants with better numerical understanding (highly numerate) were better at making comparisons between different prescription drug plan options and consequently, better at choosing the best plan. This finding suggests that individuals low in numeracy in the community are at risk for making poor choices given that the study material were designed to simulate Medicare Part D informational formats.

Speed of processing, as measured by the digit comparison task, was also significantly related to performance. Participants who scored higher on the processing speed test did better on the task than those who had slower speed of processing. This finding adds additional support to Finucane et al. (2005) report that processing speed, as assessed by the digit comparison task, is related to decision-making competence. Finucane et al. (2005) concluded that age differences in performance were partially based on the increased processing time older adults required to fully comprehend and compare information. On our measure, older adults as a group evidenced slower processing speed. However, this result did not translate into worse overall performance on the decision task for older adults. This may be because the task was untimed and participants had as much time as desired to complete the task. It is a possibility that an age effect would emerge if time were limited. However, the findings indicate that across groups and conditions, slower performance on digits comparisons was related to poorer decision-making.

The present results are consistent with research on decision-making and aging that have found that decision quality does not change with age (Mather, 2006). It may be that older adults are approaching and solving this task using different styles and heuristics than younger adults. Older adults may have had to make a decision regarding the Medicare drug plan in the real world in the recent past and could have brought more experience to the task. Finally, older adults may have been more motivated to perform well as the task reflected a real-world decision and not a hypothetical one.

At the same time, these results are not consistent with recent work on health related decisions that has found age effects (Finucane et al., 2005). One possibility is that our older sample with a high level of education was atypical. However, despite high educational attainment, our older sample did evidence lower scores on measures of fluid intelligence such as numeracy and processing speed, indicating that they were typical in some respects. Future studies are needed to ascertain the experimental conditions that allow age differences to emerge. It may be that when given unlimited time to complete a demanding decision-making task, older adults will perform just as well as younger adults. In addition, older adults have much more experience with insurance decisions than their younger counterparts. It may be that this extra exposure to Medicare style decisions allows for better performance and less perceived difficulty. For example, older adults may have felt that the task was less overwhelming for them because of the fact that they had done a similar task in choosing their actual Medicare plans.

In contrast, this study's prescription drug task may have been the first time many of the younger participants faced an insurance decision.

The fact that both groups did worse when faced with a large number of choices is strong support for the purpose of the current study. Therefore, contrary to many choice theories (Deci & Ryan, 1985) and common beliefs, offering a large number of plans to beneficiaries may be hurting their ability to choose a good plan, regardless of age. This is an effect that was not foreseen by policy makers and a finding that should be taken into consideration in the improvement of the current Medicare program.

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Appendix A

Prescription Drug Choice Task (24 plans)

SECTION C

Assume that you are enrolled in a prescription drug plan. You currently pay $35 a month for this plan, and you also pay an average of $30 a month in cost sharing. The closest pharmacy is a moderate distance (medium) from your home. You are generally satisfied with this plan but you suspect that there may be better plans for you and so wish to investigate.

On the next page is a table of companies and their plans' coverage. Please take your time in finding the best option available and mark an "X" next to the plan that you have chosen. If you would prefer to continue with the plan described above, you may mark "Stay with the current plan" on the bottom.

Company	Monthly Drug Premium	Distance to the closest pharmacy	Average monthly cost sharing	Place an X next to the plan selected
A	$37	Close	$35	
B	$28	Medium	$30	
C	$40	Far	$20	
D	$39	Close	$30	
E	$30	Close	$35	
F	$32	Medium	$35	
G	$29	Far	$35	
H	$39	Medium	$25	
I	$45	Very close	$20	
J	$34	Medium	$30	
K	$37	Close	$30	
L	$47	Very close	$25	
M	$28	Close	$25	
N	$29	Far	$35	
O	$35	Far	$30	
P	$28	Very far	$40	
Q	$36	Medium	$30	
R	$49	Very close	$25	
S	$32	Close	$25	
T	$33	Close	$30	
U	$27	Very far	$30	
V	$37	Medium	$25	
W	$31	Close	$35	
X	$37	Medium	$40	
Stay with the current plan				

Thinking about the question you just answered, how hard was it for you? Please circle only one number.

1	2	3	4	5
Not hard at all		Somewhat hard		Very hard