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Research Article

Older Drivers Reduced Engagement in Distracting Behaviors Over a Six-Year Period: Findings From the Candrive Longitudinal Study

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Abstract

Objectives: Baltes and Baltes' "selective optimization with compensation" model is pertinent to driving but evidence about the use of compensation using longitudinal designs is scarce. Therefore, we sought to determine if older drivers reduced their engagement in distracting behaviors while driving, over a 6-year period.

Methods: We used data captured over several annual assessments from a cohort of 583 drivers aged 70 and older to determine if their engagement in 12 distracting behaviors (e.g., listening to the radio, talking with passengers) declined over time. We adjusted our multivariable model for several potential confounders of the association between our outcome variable and time.

Results: Overall, and after adjustment for potential confounders, the participants reduced their engagement in distracting behaviors over the study period (odds ratio [OR] = 0.96, 95% confidence interval [CI] = 0.95–0.97). Baseline age was negatively associated with engagement in distracting behaviors (OR = 0.95, 95% CI = 0.94–0.96). Men engaged in more distracting behaviors than women (OR = 1.15, 95% CI = 1.03–1.27), as did participants living in the largest urban centers compared to participants living in the smallest areas (OR = 1.21, 95% CI = 1.04–1.41). The number of kilometers driven per year (for every 10,000 km) was positively associated with the proportion of distracting behaviors drivers engaged in (OR = 1.13, 95% CI = 1.08–1.19).

Discussion: Drivers in our cohort reduced their engagement in distracting behaviors over the study period. This suggests that older drivers adjust their driving over time, which aligns with age-related theories and models about compensation.

Keywords: Attention, Compensation, Distraction, Driving, Longitudinal

Many older drivers experience health and other changes that can affect their actual driving abilities, their self-perceived ability to drive safely, and/or their comfort in various driving situations (Molnar, Eby, Langford, et al., 2013). There is also evidence that the adjustments older drivers make to their driving are in reaction to these changes rather than to chronological age itself (Gwyther & Holland, 2012). For example, drivers who report poor health status or discomfort while driving avoid some driving situations to a greater extent than healthier drivers (Conlon et al., 2017; Meng & Siren, 2012). Ultimately though, changes in driving behavior reflect a complex decision-making process that involves several determinants (Ang et al., 2019).

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From a lifespan development perspective, it is not surprising that older drivers make driving adjustments over time. One framework that appears particularly relevant to the driving landscape is the "selective optimization with compensation" (SOC) model (P. B. Baltes & Baltes, 1990). In the SOC model, a person's goal is the "minimization of losses and maximization of gains" through "selection," "optimization," and "compensation" (M. M. Baltes & Carstensen, 1996, p. 405). Baltes and Carstensen made reference to the driving literature in describing the SOC model, and clearly outlined the model's relevance to driving (M. M. Baltes & Carstensen, 1996).

Selection

Selection typically implies a reduction in some activities to adjust for declining abilities (M. M. Baltes & Carstensen, 1996). From a transportation perspective, this may imply reducing one's life space (Webber et al., 2010). Common examples in the driving literature include avoiding long-distance travel and restricting driving to daylight, low-traffic hours, and good weather conditions. This form of selection appears to increase dramatically—more so for women than men—once drivers enter their 60s (Beck et al., 2022; Naumann et al., 2011). There is evidence that selection increases over time. For example, the authors of a study following 1,437 drivers over a 3-year period found that participants reported driving fewer miles and avoiding more driving situations over time (Braitman & Williams, 2011).

The underlying reasons for changing driving patterns are not necessarily rooted in health-related changes; selection may also result from preference and lifestyle (Molnar, Eby, Charlton, et al., 2013). Yet, while the changes in miles driven noted by Braitman and Williams were associated with lifestyle changes, the number of driving situations avoided was also associated with reported declines in memory and mobility, suggesting that some participants selected their driving situations at least partly in response to changing health conditions (Braitman & Williams, 2011). Similarly, results from two other longitudinal studies suggest that a reduction in cognitive abilities is associated with increased avoidance of some driving situations (Rapoport et al., 2016; Ross et al., 2009).

Optimization

Optimization, on the other hand, implies the maximization of available resources to continue reaching one's goals (M. M. Baltes & Carstensen, 1996). The obvious example is that of older drivers taking refresher courses. Such courses can enhance their driving abilities and enable them to retain the driving privilege for longer. As a general rule, driving courses need to include an on-road training component to be effective (Bédard et al., 2008; Marottoli, Van Ness, et al., 2007; Sawula et al., 2018). Other related interventions, such as physical exercise programs, can also provide benefits (Marottoli, Allore, et al., 2007). However, it is unclear to what extent older drivers take advantage of optimization opportunities and which ones are available to them.

Compensation

Finally, compensation refers to the use of strategies to minimize declining abilities to achieve the same goals (M. M. Baltes & Carstensen, 1996). For example, 42% of a large cohort of drivers reported leaving more room between their vehicle and the one ahead than they used to, the majority of whom felt it would be unsafe otherwise (Molnar, Eby, Charlton, et al., 2013). Similarly, driving at a slower speed may serve to offset a perceived driving challenge. Using simulated driving, Trick and colleagues demonstrated that older drivers reduce their speed in low visibility conditions (Trick et al., 2010). Other forms of decision making may also indicate compensation. For example, using naturalistic methods to observe older driver behavior in left turn situations, Swain and colleagues found that drivers with visual impairments performed more safely in these situations than drivers without impairment, leading them to suggest that drivers with a visual impairment may compensate for their lesser visual abilities by being more cautious (Swain et al., 2021).

The Present Study

Selection, while potentially valuable to maintain safe driving, does imply some form of restriction. Taken to the extreme, selection is driving cessation. On the other hand, optimization and compensation offer avenues to maintain one's level of driving activity and its associated advantages. Recent meta-analyses of driver training programs demonstrate their value (Fausto et al., 2021; Sangrar et al., 2019) but their availability within individual communities may be limited. On the other hand, compensation strategies can be implemented by drivers of all ages and hold the potential to support safe driving.

One compensation strategy drivers can adopt is to reduce their level of distraction, that is, maximizing their attention on the driving task. While the focus of research on distraction has typically been young drivers and mobile devices, distractions can be highly detrimental to drivers of all ages and proportionally they may affect older drivers the most (Marchese et al., 2022).

The potential benefit of limiting distraction is not lost on older drivers. In a qualitative study of navigation systems, older drivers appear to recognize the safety risks of distractions (Vrkljan & Polgar, 2007). In one study based on self-reports, older drivers with greater vision and cognitive impairments had greater odds of limiting their conversations with passengers than healthier drivers (Molnar, Eby, Langford, et al., 2013). Using instrumented vehicles, Charlton and colleagues examined 200 intersection maneuvers by older drivers and showed that older drivers reduce the number of distracting tasks they engage in when approaching intersections (Charlton et al., 2013). This finding was replicated and expanded upon in a study of 1,630 intersection maneuvers (Ismaeel et al., 2020).

Taken together, current cross-sectional evidence appears to support that drivers increasingly use compensation strategies as they age. Ultimately, longitudinal studies could provide the strongest evidence of this adaptation, but few studies are set up for multiyear analyses. The Candrive prospective cohort was set up to follow the naturalistic progression of older drivers over up to seven annual assessments using a comprehensive protocol (Marshall et al., 2013) and to develop a risk stratification tool for older drivers (Marshall et al., 2023). The cohort allows us to test hypotheses about older drivers' adaptation over time. One such hypothesis, and the one we selected a priori, is that older drivers would reduce their engagement in distracting behaviors (e.g., listening to music, talking to passengers) while driving, over the Candrive study period.

Method

Participants

Participants were drawn from the original Candrive prospective cohort, which started with 928 participants recruited from seven cities, covering a period of up to 6 years over seven annual assessments. Participant enrollment started in June 2009 and ended in November 2010. The last annual assessment was completed in December 2016. The main inclusion criteria included: age 70 or greater, drives at least four times per week, and intends to drive for at least five more years. Drivers who had conditions preventing them from driving or progressive conditions that may affect future driving (e.g., Alzheimer's disease) were excluded. More information is available in the Candrive protocol manuscript (Marshall et al., 2013).

Outcome Measure

At each annual assessment, participants were asked to report (yes/no) if they sometimes engaged in 12 different distracting behaviors while driving (see Supplementary Appendix 1 for the question wording). We used the proportion of items endorsed as the outcome measure. This proportion varies from 0 (no item endorsed) to 1 (all items endorsed).

Confounding Variables

The personal characteristics, living situation, and the driving environment in which one operates can influence driving habits and patterns, and could confound the association between time (i.e., year of observation) and engagement in distracting behaviors. To adjust our models accordingly, we retrieved data on several relevant variables. These variables included: baseline age, gender, relationship status (married/common-law; never married; separated/divorced; widowed), dwelling type (house; apartment; retirement home, condominium; other), setting (rural/urban/other), community size (<10,000; 10,000–49,999; 50,000–99,999; 100,000–500,000; >500,000; unsure), education (post/graduate degree; degree; diploma; trade/technical school; high school; grade school), driving exposure (in kilometers), and cognition status (possible range from 0 to 30; higher is better). Driving exposure was obtained through an in-vehicle device recording kilometers driven and compiled for each year of observation (Porter et al., 2015). Cognition was measured using the Montreal Cognitive Assessment (MoCA; Nasreddine et al., 2005).

Statistical Analyses

To ensure an adequate period of observation and a sufficient number of data points for each participant, we analyzed data only from participants who had at least four annual assessments, covering a minimum period of 4 years. Visual inspection of histograms and boxplots showed that all quantitative variables had reasonably symmetrical distributions with no extreme scores. Therefore, we computed means and standard deviations (*SD*s) for all quantitative variables. For all categorical variables, we generated frequency distributions showing raw counts and percentages within each category. We compared the participants included in the analyses to participants who were not included with *t* tests (continuous variables) and Pearson chi-square (categorical variables).

To model change over time, we estimated multilevel (i.e., mixed-effects) binomial logit models with visits clustered within participants to examine change in the proportion of the distracting items endorsed over time (Chen et al., 2017). To estimate the crude effect of time, the first two models, M0 and M1, included time as the only explanatory variable. We treated time as categorical in Model M0 and as continuous in Model M1. Both models included a random intercept with participant as the cluster variable to account for the correlated nature of repeated observations on the same participants. We then compared the fits of those two models using a likelihood ratio test and determined that M1 fit the data nearly as well as M0 ($\chi^2 = 1.83$, $df = 5$, $p = .872$). For all subsequent models, therefore, we treated time as continuous as this model uses fewer degrees of freedom.

Next, we estimated Model M2, which added a random slope for time to M1. Results showed that the variance of the random slopes was equal to zero, and that M2 was therefore identical to M1. Therefore, in Model M3, we added the following explanatory variables to M1: baseline age (centered on 70 years), gender (woman as the referent), relationship status (married/common-law as the referent), dwelling type (house as the referent), setting (rural as the referent), community size (<10,000 as the referent), education level (post/graduate degree as the referent), driving exposure (centered on 10,000 km), and MoCA score. We estimated one more model, M4, that added to M3 the interactions of each explanatory variable with time. The change in the fit of the M4 model was far from achieving statistical significance ($\chi^2 = 20.91$, $df = 23$, $p = .587$), and none of the specific interactions with time were close to achieving statistical significance ($.127 \le p \le .700$). Therefore, we reverted to Model M3 as the final model as it is more parsimonious.

All models described above were estimated using Stata's -melogit- command for multilevel (or mixed-effects) logit models. We used it for all models because it has an option to specify the dependent variable using an *events-of-trials* format. In our analyses, events = number of Yes responses, and trials = number of distracting items (12). Initial data management was done using SPSS 28 for Windows. All other analyses were carried out using Stata 16 for Windows.

Results

Final Sample

The sample forming the basis of our analyses included 583 participants, of whom 195, 240, and 148 had data covering a period of 4, 5, and 6 years, respectively. Of these participants, 23 had one yearly assessment missing, and two participants had two assessments missing; the remaining 558 participants had assessments for all years. The resulting number of yearly assessments included in the analyses is 3,418.

Sample Characteristics

The mean age of the participants at baseline was 75.76 (*SD* = 4.52). The majority were men (357, 61%). The mean kilometers driven per year at baseline was 11,772 (*SD* = 7,308) and ranged from 513 to 42,492. The mean score on the MoCA was 26.13 (*SD* = 2.44). There were some statistically significant differences between the participants included in the analyses and participants who were not included. This is not very surprising, considering the relatively large sample size. More importantly, the differences between the groups were relatively small and arguably not very significant in a practical sense. Further information about demographic characteristics is presented in Table 1.

Change in Behaviors Over Time

We present the proportion of drivers who engaged in the 12 behaviors for each of the yearly assessments available in Figure 1. The overwhelming majority of drivers listened to the radio and talked with passengers. There was a general trend toward a reduction of the behaviors over time, although for some behaviors (e.g., smoking, personal grooming) there was no reduction because endorsement was close to zero at baseline. One notable exception to the general trend was "using a global positioning system (GPS)," which was endorsed by 21% of respondents at baseline (95% confidence interval [CI] = 0.17–0.24) and increased to 31% at the last annual assessment (95% CI = 0.24–0.38).

Overall, the crude odds of engaging in the behaviors was lower for every year of observation (odds ratio [OR] = 0.95, 95% CI = 0.94–0.96). An analysis of the slope over time for each participant indicated that 380 participants (65.2%) reported a reduction in behaviors, eight (1.4%) reported no change, and 195 (33.5%) reported an increase.

While the crude OR suggests older drivers reduced their engagement in potentially distracting behaviors over time, this observation may be confounded by other variables, notably by the number of kilometers driven. The multivariable model we present in Table 2 includes adjustments for the potential confounders described earlier. The overall model was statistically significant (Wald χ^2 [df = 24] = 272.85, p < .001). After adjustment for the other variables, the time variable remained

Table 1. Demographic Characteristics

Variable	Included	Not included	Test statistic	*df*	*p*
Mean age (*SD*)	75.76 (4.52)	76.97 (5.28)	3.70	925	<.001
Man gender (*n*, %)	357 (61.2)	215 (62.5)	0.15	1	.702
Relationship status (*n*, %)			0.29	3	.962
Married/common-law	362 (62.1)	218 (63.4)			
Never married	20 (3.4)	10 (2.9)			
Separated/divorced	55 (9.4)	31 (9.0)			
Widowed	146 (25.0)	85 (24.7)			
Dwelling type (*n*, %)			8.20	4	.085
House	399 (68.4)	205 (59.6)			
Apartment	50 (8.6)	43 (12.5)			
Retirement home	7 (1.2)	6 (1.7)			
Condominium	110 (18.9)	77 (22.4)			
Other	17 (2.9)	13 (3.8)			
Setting (*n*, %)			6.64	2	.036
Rural	67 (11.5)	26 (7.6)			
Urban	505 (86.6)	316 (91.9)			
Other	11 (1.9)	2 (0.6)			
Community size (*n*, %)			46.31	5	<.001
<10,000	44 (7.6)	17 (4.9)			
10,000–49,999	54 (9.3)	14 (4.1)			
50,000–99,999	13 (2.2)	8 (2.3)			
100,000–500,000	151 (25.9)	45 (13.1)			
>500,000	308 (52.8)	257 (74.7)			
Unsure	13 (2.2)	3 (0.9)			
Education (*n*, %)			7.01	5	.220
Post/graduate degree	132 (22.6)	68 (19.8)			
Degree	146 (25.0)	72 (20.9)			
Diploma	64 (11.0)	37 (10.8)			
Trade/technical school	47 (8.1)	24 (7.0)			
High school	137 (23.5)	104 (30.2)			
Grade school	57 (9.8)	39 (11.3)			
Mean annual kilometers (*SD*)	11,772 (7,308)	9,760 (6,103)	4.30	925	<.001
Mean MoCA (*SD*)	26.13 (2.44)	25.57 (2.52)	3.31	923	.001

Notes: MoCA = Montreal Cognitive Assessment; *SD* = standard deviation. The test statistic is a *t*-statistic for comparisons of means and a Pearson chi-square for comparisons of proportions.

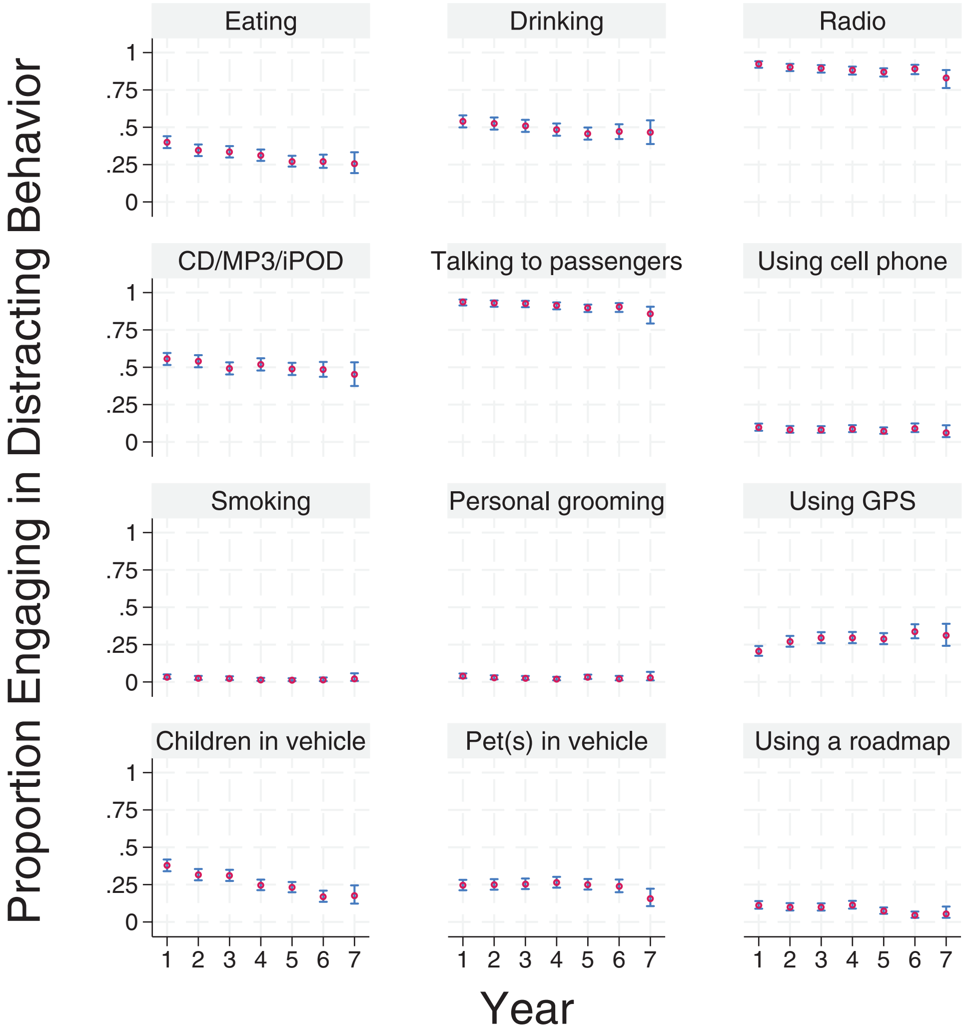

Figure 1. Proportion of drivers who reported engaging in each of the behaviors while driving, over the seven study annual assessments. Error bars represent 95% Wilson confidence intervals. GPS = global positioning system.

statistically significant (OR = 0.96, 95% CI = 0.95–0.97). Age and gender were also statistically significant, indicating that older drivers, and women, engaged in fewer behaviors than younger drivers, and men. The overall test for size of the community was also statistically significant (Wald χ^2 [df = 5] = 20.18, p = .001). Specifically, the results suggest that drivers from larger communities reported engaging in more behaviors than drivers from the smallest communities. Finally, the effect of exposure was also statistically significant, such that participants who drove more kilometers yearly also reported more behaviors.

Discussion

Overall, engagement in distracting behaviors declined over the study period. While the effect size may appear small upon initial observation, it represents the change for a 1-year interval and could be considerable over a long observation period. The decline was more salient for some behaviors than others; there was also evidence of a floor effect for some items. However, one behind-the-wheel behavior that defied this trend was using a GPS. This observation may stem from the increased availability of navigation systems on personal devices and in passenger vehicles over the study period (recruitment began in 2009).

While using a navigation system may be perceived by some older drivers as contributing to distraction (Vrkljan & Polgar, 2007), it may also be acting as a form of compensation for challenges arising with orientation using road maps and reading street signs. In an on-road study, older drivers required to reach a specific destination were rated as driving better when using a navigation system than when using paper directions (Dennis Thomas et al., 2020). However, it was also evident that drivers had to be trained to use the technology properly to benefit from it (Dennis Thomas et al., 2020). The authors of a scoping review also identified benefits from navigation systems but reported that drivers may also be distracted by secondary tasks related to the navigation systems (Classen et al., 2019). This type of distraction may emerge as a greater concern in the future as navigations systems become standard equipment, and other potentially complex vehicular interface systems arise.

Besides the passage of time, several other variables were associated with the change in distracting behaviors. Notably, women engaged in fewer distracting behaviors than men. Bieri and colleagues relied heavily on the SOC model to develop

Table 2. Logistic Regression Model for Longitudinal Data

Variable (referent)	Exp(*B*)	95% CI	Wald	*df*	*p* Value
Time (per 1-year increment)	0.96	0.95–0.97	44.15	1	<.001
Baseline age (per 1-year increment)	0.95	0.94–0.96	85.73	1	<.001
Man gender (woman)	1.15	1.03–1.27	6.28	1	.012
Relationship status (married/common-law)	—	—	6.18	3	.103
Never married	0.8	0.63–1.00	3.83	1	.050
Separated/divorced	1.1	0.94–1.28	1.43	1	.231
Widowed	1.02	0.92–1.13	0.11	1	.735
Living arrangement (house)	—	—	4.83	4	.306
Apartment	0.88	0.77–1.01	3.29	1	.070
Retirement home	0.99	0.77–1.27	0.01	1	.928
Condominium	1	0.91–1.10	0.00	1	.965
Other	0.88	0.73–1.07	1.61	1	.204
Setting (rural)	—	—	2.03	2	.362
Urban	0.94	0.82–1.07	0.88	1	.348
Other	1.07	0.84–1.38	0.31	1	.580
Community size (<10,000)	—	—	20.18	5	.001
10,000–49,999	0.92	0.78–1.09	0.95	1	.331
50,000–99,999	0.99	0.79–1.25	0.01	1	.926
100,000–500,000	1.11	0.94–1.31	1.46	1	.226
>500,000	1.21	1.04–1.41	5.90	1	.015
Unsure	0.94	0.74–1.20	0.25	1	.616
Education (post/graduate degree)	—	—	5.46	5	.362
Degree	0.97	0.87–1.08	0.37	1	.544
Diploma	0.9	0.78–1.04	1.99	1	.159
Trade/technical school	0.98	0.85–1.14	0.05	1	.830
High school	0.98	0.87–1.10	0.13	1	.717
Grade school	0.86	0.74–1.00	3.87	1	.049
Exposure (per 10,000 km)	1.13	1.08–1.19	27.89	1	<.001
MoCA	1.01	0.99–1.02	1.05	1	.305
Constant	0.57	0.40–0.83	8.81	1	.003
Variance of random intercepts	0.19	0.16–0.22	—	—	—

Notes: CI = confidence interval; MoCA = Montreal Cognitive Assessment. Wald tests with *df* = 1 are the squares of *z*-tests reported by Stata's -melogit- command. Wald tests with *df* > 1 were obtained by using postestimation -contrast- commands.

a questionnaire aiming at capturing adjustments older drivers make along the three domains of the SOC model; their preliminary results indicated that women made more adjustments than men (Bieri et al., 2015). Consistent with our findings, the same authors found also that older drivers made more adjustments than younger drivers.

Among the other demographic variables examined, the size of the community where participants resided was the only variable that achieved statistical significance, the main finding being that people residing in the largest urban centers (>500,000 population) engaged in more distracting behaviors than people residing in small towns (<10,000).

Consistent with expectations, participants who drove more kilometers engaged in more distracting behaviors than participants who drove less. Although it is possible that drivers who experience difficulties reduced both distractions and distance traveled, including this variable in our model was crucial, and we are confident that the in-vehicle recording, rather than self-reported distance traveled, adds to the validity of our approach (Porter et al., 2015). Finally, cognition status was not associated with engagement in distracting behaviors. A longer observation period may be required to identify if an association between changes in cognition and compensation exists. It is also possible that drivers who experienced more cognitive decline dropped out of the study and that our results are based on drivers who remained relatively healthy over the course of the study. Drivers who were not included in our analyses did score somewhat lower on the MoCA at baseline (mean difference = −0.56, 95% CI = −0.89 to −0.23), but it is not clear that the difference is clinically significant.

Within our study context, less engagement in distracting behaviors is likely to indicate, as Cabeza and colleagues noted (Cabeza et al., 2018), "compensation for" a reduction, or possibly, a perceived reduction in attention capacity. Given that a third of drivers in our sample did not alter their behavior, and that changes in attention capacity with aging vary across individuals (Cohen et al., 2019), it is possible that some drivers did not experience a deterioration in attention capacity over the study period, or maybe did not perceive a change. Such possibilities underscore the need to understand the core reasons behind compensatory changes, but there is little literature on that presently.

Research about selection (e.g., avoidance) may provide some clues. Both perceived and actual driving abilities are linked to selection. For example, lower driving comfort (measured with the Driving Comfort Scales) and self-perceived abilities (measured with the Perceived Driving Abilities Scales) were associated with measures of driving exposure using in-vehicle devices (Blanchard & Myers, 2010), suggesting that how one feels about driving may influence selection. However, poorer on-road scores were associated with more driving avoidance in a different study (Koppel et al., 2016), indicating that actual abilities do matter. That said, changes in avoidance may depend more on perceived rather than actual driving abilities (Baldock et al., 2006) and the former could be a mediator between actual abilities and avoidance (Tuokko et al., 2016). Hence, driving self-awareness appears important to support selection and compensatory strategies (Paire-Ficout et al., 2021), as well as optimization (Nasvadi & Vavrik, 2007), and should be the target of interventions (Anstey et al., 2005). Other variables such as personality characteristics (St Louis et al., 2023), and the perceived value of compensatory strategies (Levasseur et al., 2016), may also play a role in their use and deserve further investigation.

While further research is required to identify the motivating factors behind compensatory approaches, supporting the use of compensation to maintain safe driving has obvious benefits on its own. Furthermore, it is increasingly evident that avoidance may not always be possible because of the negative consequences it entails or for logistical reasons, for example, when someone is responsible for the transportation of others (Vivoda et al., 2022). Yet, even if some older drivers do not have the option to avoid some driving situations, they have the option to adopt optimization and compensation strategies. Appreciating the different circumstances older drivers experience, and tailoring interventions to their needs, may hold the key to successfully support both mobility and road safety (Dickerson et al., 2019).

One obvious limitation to our study is the use of self-reported behaviors as the main outcome measure as it may be subject to demand characteristics. However, our experience with this cohort is that participants were quite forthright (e.g., in reporting at-fault crashes; Porter, 2018), and they reported an increase in the use of a GPS. We also note that the observation period, although long compared to most studies, does not represent the whole driving lifespan, and that some emerging technologies were not captured (e.g., voice-activated systems).

Another limitation is that engaging in some distracting behaviors may be outside of the participants' control. For example, opportunities to drive with young children may become less frequent as grandchildren may start driving themselves; we tried to circumvent this issue by adjusting our model for age. It is also possible that public safety campaigns and discussing driving with others (e.g., family, family physician) may have influenced behavior in addition to intrinsic changes.

Among the study strengths, the longitudinal design allows us to expand on findings from studies based on cross-sectional designs. The measurement of distance traveled with in-vehicle devices also adds validity to our analyses. Finally, while we cannot claim to have a sample representative of all older Canadians, many of whom do not drive, the Candrive sample is representative of Canadian drivers when compared to data from 3,899 older drivers contained in the Canadian Community Health Survey—Healthy Aging survey (Gagnon et al., 2016). That said, there were some minor differences between the sample of drivers included in our analyses and drivers who were not included. While the differences, where statistically significant, were generally very small (e.g., the mean age difference was 1.21, 95% CI = 0.57–1.85), the study sample appears slightly younger, more rural, and more mobile. Furthermore, while the findings from our sample may be generalized to other similar drivers, it is not possible to determine if those findings will hold for future cohorts.

Through our analyses we have shown that many older drivers in our cohort increasingly used compensatory strategies as they aged. Using such strategies to maintain safe driving, and the independence and quality of life it confers, fits well within the SOC model. When possible, using strategies that reflect selection, optimization, and compensation would presumably be the most successful approach to maintain safe driving in light of the changes that may occur with aging. Although the bulk of existing research has focused on selection as the primary adaptive strategy (Ang et al., 2019), compensation holds considerable potential to support both mobility and safe driving, it should be developed further and promoted as a key strategy.

Supplementary Material

Supplementary data are available at *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences* online.

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Conflict of Interest

None.

Data Availability

The authors will share the analytic methods upon request. This Candrive substudy was not preregistered.

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