

Older driver resilience levels and self-reported driving-related abilities, perceptions, and practices over five years

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Abstract

This study investigated resilience scores for drivers aged 75 years and older at two points in time, approximately five years apart (Time 1: Male: 67.2%; Mean age=81.6 years, SD=3.3, Range=76.0-90.0; Time 2: Male: 67.1%, Mean age=85.3 years, SD=3.0, Range=81.0-94.0). Participants completed a range of self-reported driving-related questionnaires and a resilience scale. Data for a subset of 125 Ozcandrive participants completing the resilience scale at both Time 1 and Time 2 were analysed. Results show a significant increase in resilience across the two time points, and increasing strength of associations between resilience and self-reported driving-related abilities, perceptions, and practices.

Background

Resilience is “the process of adapting well in the face of adversity, trauma, tragedy, threats or significant sources of stress” (American Psychological Association, 2019, para. 4). As people age into older adulthood, they are more likely to experience events that may impact their driving, such as age-related cognitive and functional declines, serious illness, or disability. The ability of an individual to bounce back from adversity may influence driving behavior. This study investigated whether resilience of older drivers changes over time, and if relationships between resilience, gender, and self-reported driving-related abilities, perceptions, and practices remain stable or change.

Method

Participants were from the Candrive/Ozcandrive study, a prospective cohort study which involves 1,230 older drivers from Canada, Australia and New Zealand. Participants completed yearly assessments for up to eight years, including demographic and driving history questions, health/functional performance assessments, and self-reported information on driving-related abilities, perceptions, and practices (Marshall et al., 2013). Analyses are presented from a subset of Ozcandrive participants (n=125) from Australia who completed a resilience scale at two time points approximately five years apart, as well as self-reported driving-related measures. Participants were primarily male (67.2%) with a mean age of 81.6 years (SD=3.3, Range=76.0-90.0) at Time 1.

Resilience: measured using the 14-item Resilience Scale. Scores range 14-98, with higher scores indicating higher resilience (Wagnild, 2009).

Driving comfort: measured using the 13-item daytime (DCS-D) and 16-item nighttime (DCS-N) Driving Comfort Scales. Scores range 0-100, with higher scores indicating greater driving comfort (Blanchard, Myers & Porter, 2010; MacDonald, Myers & Blanchard, 2008).

Perceived driving abilities: measured using the 15-item Perceived Driving Abilities (PDA) scale. Scores range 0-45, with higher scores indicating more positive perceptions of driving abilities (Blanchard et al., 2010; MacDonald et al., 2008).

Driving practices: measured using the 14-item Situational Driving Frequency (SDF) and 20-item Situational Driving Avoidance (SDA) scales. SDF scores range 0-56, with higher scores indicating driving more often in challenging situations. SDA scores range 0-19, with higher scores indicating greater avoidance (MacDonald et al., 2008; Myers et al., 2008).

Results

Resilience increased significantly from Time 1 (Median=82.0, IQR=71.5-87.0, Range=52-98) to Time 2 (Median=84.0, IQR=77.0-89.0, Range=38-98; $z=-2.9$, $p<.01$). Females had significantly higher resilience than males at Time 1 (Median: 84.0/81.0, $U=2.3$, $p=.02$) and Time 2 (Median: 86.5/82.0, $U=2.1$, $p=.03$). There was a significant increase in resilience of males over time ($z=-2.9$, $p<.01$), There was no significant increase for females and no differences by age.

Table 1 shows self-reported driving-related measures across five years and correlations with resilience. Although scores of driving comfort and perceptions of driving abilities significantly decreased between Time 1 and Time 2, the strength of association between resilience scores and these measures increased.

Table 1. Self-reported driving measures and correlations with resilience at Times 1 and 2.

Self-reported driving-related measures	Time 1		Time 2		Change between Times 1 & 2	
	Mean (SD) Median (IQR)	Correlation (r_s)	Mean (SD) Median (IQR)	Correlation (r_s)	Wilcoxon Z	p-value
DCS – D (Max = 100)	78.3 (13.9) 80.8 (69.2-86.5)	.16	75.9 (14.9)** 78.8 (67.3-86.5)	.27**	2.4	.02
DCS – N (Max = 100)	70.7 (18.3) 71.9 (57.8-84.4)	.17	66.9 (20.8)** 70.3 (53.1-81.3)	.24**	2.7	.01
PDA (Max = 45)	34.4 (6.2) 36.0 (30.0-39.0)	.29**	32.7 (6.6)** 33.0 (28.0-38.0)	.34**	3.8	<.01
SDF (Max = 56)	33.7 (6.6) 34.0 (30.0-38.0)	.17	31.4 (6.6)** 32.0 (26.0-35.0)	-.02	5.4	<.01
SDA (Max = 19)	5.0 (3.4) 4.0 (2.0-7.0)	-.09	5.4 (4.2)** 5.0 (2.0-8.0)	-.14	-4.7	<.01

** $p<.01$

Conclusion

These findings suggest a significant and increasingly stronger relationship between older drivers' resilience and driving-related abilities, perceptions and practices over time. Preliminary support for the value of resilience is encouraging given evidence that people have the capacity to increase their resilience. Higher levels of driving comfort and positive perceptions of driving abilities in those with higher resilience may contribute to more confidence in driving, thereby extending safe mobility.

References

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