Not All Older Adults Have Insight Into Their Driving Abilities: Evidence From an On-road Assessment and Implications for Policy

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Purpose. To compare self-reported driving ability with objective measures of on-road driving performance in a large cohort of older drivers.

Methods. Two hundred and seventy community-living adults aged 70–88 years recruited via the electoral roll completed a standardized assessment of on-road driving performance and questionnaires determining perceptions of their own driving ability, confidence, and driving difficulties. Retrospective self-reported crash data over the previous 5 years were recorded.

Results. Participants reported difficulty with only selected driving situations, including driving into the sun, in unfamiliar areas, in wet conditions, and at night or dusk. The majority of participants rated their own driving as good to excellent. Of the 47 (17%) drivers who were rated as potentially unsafe to drive, 66% rated their own driving as good to excellent. Drivers who made critical errors, where the driving instructor had to take control of the vehicle, had no lower self-rating of driving ability than the rest of the group. The discrepancy in self-perceptions of driving ability and participants’ safety rating on the on-road assessment was significantly associated with self-reported retrospective crash rates, where those drivers who displayed greater overconfidence in their own driving were significantly more likely to report a crash.

Conclusions. This study demonstrates that older drivers with the greatest mismatch between actual and self-rated driving ability pose the greatest risk to road safety. Therefore, licensing authorities should not assume that when older individuals’ driving abilities begin to decline they will necessarily be aware of these changes and adopt appropriate compensatory driving behaviors; rather, it is essential that evidence-based assessments are adopted.

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THE growth in the older population and the corresponding increase in older drivers on our roads pose a number of challenges to driving authorities and the community, given the relatively high fatality rates reported for older drivers (1). It is widely accepted, however, that older drivers should not be restricted from driving based upon their chronological age but rather on their functional aging and capacity to drive safely. Accordingly, there has been a growing body of research aimed at determining which tests can accurately identify those older drivers who are unsafe, with the aim of developing screening batteries that can be used to determine eligibility for licensure (2–4), allowing those older drivers who are safe to drive to do so for as long as possible, which is important as driving cessation can be associated with reduced mobility and quality of life (5,6).

It has been suggested that it may not be necessary to implement screening batteries at licensure, based on the assumption that most older drivers are able to effectively self-evaluate their own driving ability and accordingly self-regulate their driving to compensate for any declines in driving abilities (7–9). In our Multifactorial Model of Driving Safety, we identified self-monitoring as a component of safe driving behavior, in addition to adequate cognitive and sensorimotor function (10). This self-regulation might take the form of reducing driving exposure through shorter and lesser frequent trips (11,12), as well as avoiding more challenging driving conditions, such as driving at night and in poor weather (4,7,13–17). Although there has been considerable debate about whether drivers in general have accurate insight into their own driving abilities (13,18), this has not been well explored in older adults.
In this study, we aimed to evaluate how well self-perceptions of driving ability of a group of community-dwelling older drivers aged 70 and above corresponded to their actual driving performance, as assessed under real-world driving conditions, and self-reported retrospective and prospective crashes. We hypothesized that those drivers whose perceptions of their own driving ability and difficulties were best calibrated with their actual ability would be less likely to have crashes. This is based on the assumption that having insight into one’s own ability provides a driver with the opportunity to identify and avoid driving situations that are too challenging, given that self-perceptions of driving confidence and ability are closely tied to self-regulation in terms of avoiding challenging driving situations (12,13). Without such self-regulation, drivers with diminishing ability are likely to pose a greater risk both to themselves and to the wider community, as they will continue to drive in challenging situations, well after the time that they should consider restricting their driving exposure.

**METHODS**

**Participants**

Community-dwelling individuals aged 70 years and above were recruited via the electoral roll to participate in a larger study of 449 older adults. Potential participants were initially mailed a letter, asking them to participate, and were then followed up with a telephone call, in which the purpose of the study was described to them. Only those older adults living independently and who could walk unassisted were eligible to participate. Three hundred and sixty-four of these were current drivers of whom, 272 agreed to participate in the on-road assessment (75% response rate). Two participants were excluded because their scores on the Mini-Mental State Examination (19) were less than 24, giving a total of 270 participants (191 men, 79 women); for three of these participants, there was incomplete data on detailed elements of the driving assessment but overall safety ratings were provided. For the questionnaire items, there were very small numbers (<3%) of randomly missing responses on individual questions; the valid N for each item is presented in Table 1.

The study was conducted in accordance with the Declaration of Helsinki and was approved by the Queensland University of Technology Human Research Ethics Committee. All participants were given a full explanation of the experimental procedures, and written informed consent was obtained with the option to withdraw from the study at any time.

All participants completed a battery of vision, cognitive, and motor control tests, the results of which are reported elsewhere (3).

**Driving Performance**

Driving performance was assessed under in-traffic conditions in an automatic, dual-brake vehicle using a previously validated technique (20). An accredited professional driving instructor, who was responsible for monitoring safety, sat in the front passenger seat with access to the dual brake. Participants were directed to drive along a 19.4 km route on the open road, which consisted of city and suburban streets, simple and complex intersections, and a range of traffic densities. The driving assessment was generally 50 minutes in duration and included a short warm-up drive to become familiar with the vehicle. The drive was terminated early if the driver was considered too unsafe to proceed.

**Driving Behaviors Observed**

Performance at each of 148 locations along the route was scored by an occupational therapist, experienced in driving assessment and seated in the back seat of the vehicle. At each location, seven aspects of driving performance were scored as follows: (a) general observation (including scanning, attention to signs and road markings and other road users, and also the correct use of mirrors); (b) observation of blind spots (correctly performing a shoulder check for vehicles in the car’s blind spot); (c) indication (signaling); (d) braking/acceleration; (e) lane positioning; (f) gap selection (maintaining appropriate following distance, as well as correctly merging and entering traffic); and (g) approach (maintaining appropriate planning and preparation for each driving situation or maneuver). For each behavior type, the total number of errors as a proportion of the total number of opportunities for error was calculated (21).

**Driving Situations**

Each of the driving situations was further allocated into one of six categories, including traffic light–controlled intersections, one-way traffic (straight and curved driving), two-way traffic (straight and curved driving), give way (stop/give-way intersections, nontraffic light–controlled intersections, pedestrian crossing, and roundabouts), maneuvering (reversing, parking, turnaround maneuver, and negotiation through traffic-slowing devices), and merging (lane changing, merging, and entering/exiting traffic flow). This allowed identification of those situations where older drivers experienced most difficulty. Again, for each participant and for each situation type, a score was calculated representing the proportion of errors to total opportunities for errors (21).

**Questionnaires**

To obtain an overall sense of driving experiences, habits, and perceptions, a previously validated 57-item questionnaire was administered (20,22). Participants were asked to
provide details on their frequency of driving and distances driven, where they drove and to rate how good a driver they were on a scale from “poor” to “excellent.” Participants were then asked to rate the difficulty of various components of driving and how often they experienced difficulty with these behaviors. Twenty-two questions related to perceived difficulty of driving, in response to the question “Please rate how difficult you find the following driving conditions and activities.” (on a scale of 1—very difficult to 5—very easy). These items were reverse scored for analysis to represent increasing difficulty. A further 12 items measured the frequency with which participants experienced particular difficulties (in response to the question “Do you ever experience difficulties with the following driving activities?” on a scale from 1—never to 5—always). The questionnaire also included items specifically relevant to older drivers, such as problems with moving the foot from one pedal to another. Participants were also asked to report the number of crashes they had been involved in over the previous 5 years.

The number of crashes that participants were involved in during the 12-month follow-up period was recorded using crash diaries, which participants were asked to return on a monthly basis; participants also reported whether police attended the crash (23). If participants failed to complete their monthly crash diaries, they were sent reminders by mail and also received a follow-up phone call.

### Statistical Analysis

Participants’ self-ratings of confidence and ability were correlated with performance measures on the on-road assessment using standard Pearson correlation coefficients, as well as Spearman rank-order correlations to control for any possible effects of skew or outliers. A difference score was also formed using scaled scores on both confidence and objective performance (each expressed on a 0–10 scale), and this measure was compared for those who reported a crash and those who did not. An a priori power analysis was performed and revealed that for the available sample size, a Pearson correlation would achieve 90% power to detect a small effect \( r = .16 \) (24).

### Results

#### Demographic Details

The demographic details of the 270 participants have been previously reported (3). Participants were younger than nonparticipants, had more driving experience, and were more likely to be men (71%). Participants also had more years of education \( M = 12.32 \), \( SD = 4.11 \) than nonparticipants \( M = 10.34 \), \( SD = 3.54 \), \( p < .001 \) (3). All participants had visual acuity at or above the visual standard for driver licensing in Australia (20/40 or 6/12). Of the 270 participants, 47 (17.4%) had a driver safety rating of 3 or less, indicating that critical driving errors had been made, 

<table>
<thead>
<tr>
<th>Variable labels</th>
<th>Percentage of Respondents</th>
<th>Very easy (%)</th>
<th>Easy (%)</th>
<th>Not difficult (%)</th>
<th>Difficult (%)</th>
<th>Very difficult (%)</th>
</tr>
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<tbody>
<tr>
<td>Driving on a roundabout</td>
<td>1.42</td>
<td>269</td>
<td>14</td>
<td>37</td>
<td>42</td>
<td>7</td>
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<tr>
<td>Making a right-hand turn</td>
<td>0.89</td>
<td>269</td>
<td>38</td>
<td>36</td>
<td>26</td>
<td>1</td>
</tr>
<tr>
<td>Making a left-hand turn</td>
<td>0.72</td>
<td>269</td>
<td>46</td>
<td>36</td>
<td>17</td>
<td>1</td>
</tr>
<tr>
<td>Merger with other traffic</td>
<td>1.29</td>
<td>269</td>
<td>20</td>
<td>36</td>
<td>39</td>
<td>5</td>
</tr>
<tr>
<td>Changing lanes</td>
<td>1.2</td>
<td>269</td>
<td>23</td>
<td>36</td>
<td>39</td>
<td>2</td>
</tr>
<tr>
<td>At traffic lights</td>
<td>0.76</td>
<td>268</td>
<td>43</td>
<td>38</td>
<td>19</td>
<td>0</td>
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<tr>
<td>Overtaking a vehicle</td>
<td>1.22</td>
<td>268</td>
<td>21</td>
<td>38</td>
<td>39</td>
<td>2</td>
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<tr>
<td>Driving at night</td>
<td>1.79</td>
<td>267</td>
<td>8</td>
<td>30</td>
<td>40</td>
<td>19</td>
</tr>
<tr>
<td>Driving in wet conditions</td>
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<td>268</td>
<td>7</td>
<td>25</td>
<td>50</td>
<td>17</td>
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<td>Driving into the sun</td>
<td>2.28</td>
<td>268</td>
<td>4</td>
<td>19</td>
<td>28</td>
<td>43</td>
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<tr>
<td>Driving in peak-hour traffic</td>
<td>1.59</td>
<td>269</td>
<td>13</td>
<td>31</td>
<td>41</td>
<td>14</td>
</tr>
<tr>
<td>Driving at dusk</td>
<td>1.76</td>
<td>269</td>
<td>8</td>
<td>28</td>
<td>45</td>
<td>17</td>
</tr>
<tr>
<td>Driving in unfamiliar areas</td>
<td>2.07</td>
<td>268</td>
<td>4</td>
<td>18</td>
<td>48</td>
<td>30</td>
</tr>
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<td>Negotiating intersections without traffic lights</td>
<td>1.58</td>
<td>268</td>
<td>12</td>
<td>26</td>
<td>54</td>
<td>7</td>
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<tr>
<td>Freeway driving</td>
<td>1.03</td>
<td>266</td>
<td>30</td>
<td>40</td>
<td>26</td>
<td>3</td>
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<td>Reversing from a parking lot</td>
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<td>268</td>
<td>14</td>
<td>34</td>
<td>44</td>
<td>7</td>
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<td>Parallel parking</td>
<td>1.47</td>
<td>267</td>
<td>17</td>
<td>32</td>
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<tr>
<td>Estimating the speed of your car</td>
<td>1.41</td>
<td>269</td>
<td>13</td>
<td>36</td>
<td>47</td>
<td>3</td>
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<tr>
<td>Reading all road signs</td>
<td>1.48</td>
<td>269</td>
<td>14</td>
<td>32</td>
<td>46</td>
<td>8</td>
</tr>
<tr>
<td>Seeing things to the side of you</td>
<td>1.50</td>
<td>269</td>
<td>12</td>
<td>32</td>
<td>51</td>
<td>4</td>
</tr>
<tr>
<td>Finding your way to your chosen destination</td>
<td>1.41</td>
<td>267</td>
<td>16</td>
<td>33</td>
<td>46</td>
<td>5</td>
</tr>
<tr>
<td>Driving in familiar areas during the daytime</td>
<td>0.70</td>
<td>175</td>
<td>46</td>
<td>38</td>
<td>15</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: Score is the mean response to the question “Please rate how difficult you find the following driving conditions and activities” on a five-point scale (1 = very easy, 5 = very difficult).
whereas 223 (82.6%) had a driver safety rating greater than 3; for three participants, there was incomplete data on detailed elements of the driving assessment. Twenty-five percent of the participants reported that they had been involved in a crash in the previous 5 years, and 11% went on to have a crash during the 12 months of diary follow-up (21).

Overall, 98% of participants rated themselves between "average" and "excellent" as a driver, with 75% rating themselves as a "good," "very good," or an "excellent" driver (48%, 26%, and 1%, respectively), whereas 23% rated themselves as an "average" driver. Only 2% of participants rated themselves as a "fair" driver, and no participants rated themselves as a "poor." Those participants who rated themselves as better drivers drove more frequently, \( r(248) = .213, p = .001 \). Importantly, participants who were scored as potentially unsafe on the on-road assessment (a score of \( \leq 3 \)) rated themselves equally good drivers as those scored as safe (fair—1% vs 4%, average—22% vs 30%, good—48% vs 45%, very good—27% vs 19%, excellent—1% vs 2%, respectively, \( \chi^2 (4) = 4.40, p = .354 \)). The distribution for those rated as potentially unsafe to drive is given in Figure 1. Even those drivers who made critical errors that required the instructor to take control of the vehicle to avoid an incident had no lower self-rating of their own driving ability than the rest of the group \( r(264) = 1.214, p = .226 \). There was no difference in self-ratings of driving ability according to previous crash involvement, \( r(267) = -0.048, p = 0.962 \).

**Self-reported Driving Difficulties**

Although drivers expressed greater difficulty with certain driving situations (Tables 1 and 2), including driving into the sun, in unfamiliar areas, in wet conditions, and at night or dusk, overall participants reported little difficulty with driving. For the technical skills, in particular (Table 2), there was relatively little range in self-rated difficulty, with the vast majority of participants reporting that they never experienced any difficulty. Driving in familiar areas during the daytime was rated as least difficult, as were negotiating traffic light–controlled intersections and making right- or left-hand turns. In terms of difficulty with some of the technical driving activities, participants reported only a few situations that they often considered difficult including, "Turning to look over your shoulder to check your blind spot," "Turning, braking, and judging distances at the one time when parking car nose first," and "Switching on the indicator, checking the blind spot, and accelerating and turning the steering wheel when overtaking another car or changing lanes" (see Table 2), although as stated below, this lack of difficulty was not necessarily reflected by performance in the driving assessment.

Table 3 shows those questionnaire items that could be compared with specific driving behaviors in the on-road assessment to determine the correspondence between objectively observed driver difficulties and self-reported difficulties. Overall, the correlations are small in terms of effect size, (24) and mostly nonsignificant, despite high statistical power for the study. The greatest self-awareness was shown for self-reported difficulty in negotiating traffic light–controlled intersections, and for overall self-rating of driving ability, where self-rated driving ability tended to positively correlate with actual on-road driving ability, albeit only weakly.

We also assessed whether each participant could be considered overconfident or underconfident by forming difference scores between their self-reported ratings of their own driving (converted to a 1–10 scale) and their driving performance on the on-road assessment (on a 0–10 scale). This value would be higher for those who were overconfident (their confidence was higher relative to their performance measured on the driving assessment test) and lower for those who were underconfident (their confidence was lower relative to their driving performance). A \( t \) test was conducted examining this measure as a function of participants’ 5-year crash history. Those who reported a crash over the previous 5 years were more overconfident than those who did not crash \( t(267) = -2.28, p = .006 \). Prospective crashes, however, did not relate to the measure of confidence. Interestingly, the discrepancy between self-rated driving ability and score on the driving test was also significantly related to tests of cognitive function, including the Mini-Mental State Examination, \( r(269) = -0.13, p = .033 \), a computerized Digit-Symbol Substitution test, \( r(269) = .24, p = .001 \), the Trail-Making test part A, \( r(247) = .28, p = .001 \), and the Trial-Making test part B, \( r(244) = .28, p = .001 \).

**DISCUSSION**

To our knowledge, this is the first large cohort study of community-dwelling older drivers to report associations between specific driving performance measures and
OLDER DRIVERS' INSIGHT INTO DRIVING ABILITY

Self-perceptions of driving ability and difficulties. Overall, participants reported relatively few difficulties with driving, however, these self-perceptions were at odds with objective measures of their on-road driving performance. Importantly, those drivers who had the poorest calibration between their rating of their own driving ability and actual driving performance were those most likely to report a crash in the previous 5 years and hence present the greatest risk to road safety.

The driving situations reported to be most difficult included driving into the sun, in unfamiliar areas, at night, in wet conditions, and at dusk, whereas driving in familiar areas, driving at traffic lights, and making a left or right turn were reported as least difficult. These findings are in general accord with previous studies that have also highlighted that driving at night or in rain were those activities rated most difficult and hence avoided by many older drivers (13,25). Indeed, in a large-scale survey-based study, older drivers typically reported being very confident in the majority of driving situations, with the exception of night driving (and specifically also driving at night in wet weather), where "very confident" ratings were made by only around half of the drivers (12). The technical driving activities rated as most difficult were those requiring a number of activities to be undertaken simultaneously (eg, turning to look over one's shoulder to check a blind spot and while turning or braking and judging distances while parking). These difficulties are likely to reflect the decline in the ability to divide attention with increasing age (26).

Almost all of the drivers (98%) rated themselves as an average or above-average driver, with 75% rating themselves as a good, very good, or an excellent driver, which is in line with previous studies that have also reported a strong optimism bias in terms of self-perceptions of driving ability (18,27). Importantly, the accuracy of these self-ratings was variable, where many participants who were rated as unsafe on the on-road assessment judged themselves to be very good drivers and vice versa. Indeed, a considerable proportion of drivers who rated themselves as above-average drivers had critical driving errors and some had the drive suspended because the assessors considered the driver to be unsafe to drive. This finding that self-rating of driving and actual ability are not necessarily aligned in older drivers is consistent with the results of a range of studies using different methodological approaches including driving simulators (28), history of adverse driving events (18), and on-road evaluations of driving performance (13,18). The association between lack of insight and lower Mini-Mental State

Table 2. Ratings of Difficulty for a Range of Technical Activities Involved in Driving

<table>
<thead>
<tr>
<th>Variable labels</th>
<th>Percentage of Respondents</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>Engaging the accelerator or brake pedal?</td>
<td>1.03</td>
</tr>
<tr>
<td>Steering your car?</td>
<td>1.03</td>
</tr>
<tr>
<td>Switching your attention from looking ahead to looking in the rear-view/side-view mirrors?</td>
<td>1.25</td>
</tr>
<tr>
<td>Changing gear or engaging your transmission?</td>
<td>1.03</td>
</tr>
<tr>
<td>Simultaneously driving and changing stations on your radio or turning the air conditioning on/off?</td>
<td>1.31</td>
</tr>
<tr>
<td>Turning to look over your shoulder to check your blind spot?</td>
<td>1.46</td>
</tr>
<tr>
<td>Switching your windscreen wipers on/off while driving?</td>
<td>1.17</td>
</tr>
<tr>
<td>Turning your headlights on/off or to high beam while driving?</td>
<td>1.11</td>
</tr>
<tr>
<td>While parking your car nose first, do you ever experience difficulty with turning, braking, and judging distances at the one time?</td>
<td>1.44</td>
</tr>
<tr>
<td>Disengaging your hand brake and immediately accelerating when conducting a hill start?</td>
<td>1.15</td>
</tr>
<tr>
<td>Switching on your indicator, checking your blind spot, accelerating and turning the steering wheel when you are overtaking another car or changing lanes?</td>
<td>1.36</td>
</tr>
<tr>
<td>Looking left, right, and straight ahead when crossing an intersection without traffic lights?</td>
<td>1.32</td>
</tr>
</tbody>
</table>

Note: Score is the mean response to the question “Do you ever experience difficulties with the following driving activities” on a five-point scale (1 = never, 5 = always).
Examination scores highlights the potential risk of older drivers with cognitive impairment or preclinical dementia. Even if older drivers retain the perceptual motor skills to manage a vehicle, such drivers may lack insight into their own limitations or make poor judgments about their capacity to manage complex or challenging driving situations.

An important advantage of the study reported here is that the on-road driving assessment contained a high level of detail regarding performance, as well as providing a 10-point rating of potential safety and pass/fail outcomes (13,18). This approach enabled associations between specific driving abilities and self-rated difficulties to be determined on the same measures, as well as determining the association between overall self-rated and actual driving ability. These individual correlations highlighted the relatively low strength of the relationship between actual and self-reported difficulties, with the highest association being for difficulties at traffic light–controlled intersections (which was rated as being a low-difficulty driving task), and the lowest associations being at roundabouts and merging, where the level of actual ability bore little relationship with self-rated difficulties and performance. In this sample, participants’ lack of insight into their own performance, both at an overall and at a specific level, suggests that self-regulation as a strategy to offset declines in performance would be potentially ineffective, given that some drivers would be regulating unnecessarily and hence limiting their independence and mobility, while others would not consider it necessary, given their lack of self-rated difficulty with most driving tasks. It also suggests that those drivers who do demonstrate difficulties, in particular high-risk driving situations, are unlikely to self-regulate and avoid these situations, if they are not aware that they have difficulties.

Importantly, those individuals where the discrepancy between actual and self-reported performance was in a positive direction, that is, their confidence in their own performance was higher than actual ability, were significantly more likely to report a crash in the previous 5 years.
also consistent with previous studies, which reported that while drivers with poorer health and sensory or cognitive function tended to drive less, not all older drivers with poorer functional abilities restricted their driving (29) and others where a significant proportion of high-risk drivers were shown not to self-regulate their driving (25). Baldock and colleagues (13) similarly reported that poorer performance in an on-road driving assessment was not related to overall avoidance of difficult driving situations.

These findings are likely to be generalized to a broader older driver population, as our participants were a cross-sectional sample derived from older drivers who regularly drove in city and suburban roads and who reported that they were confident to drive. We also included a well-validated, quantitative assessment of on-road driving performance on all of our participants, which was independently administered by masked assessors. Although self-reported rather than state-recorded crash data were included in this study, this is appropriate because as we have previously reported, current state crash records in Australia do not capture a large proportion of crashes and should therefore be considered with caution (23). However, it is important to note that there is the possibility of some memory bias, particularly among those participants who may experience some degree of cognitive decline, which may reduce the likelihood of self-reporting of crashes. Interestingly, in this sample, those with decreased self-awareness (in the sense that they exhibited a larger discrepancy between actual and self-rated driving performance) were more, rather than less, likely to report a crash, indicating that such recall bias did not influence the main findings.

The implications of this study are that licensing authorities should not assume that when the driving abilities of older individuals begin to decline that they will necessarily be aware of these changes and limit their driving exposure and therefore avoid challenging and unsafe driving situations. Indeed, if older drivers do not have the capacity to accurately assess their own ability, as these data would suggest, any self-regulation is likely to be inappropriate. In terms of policy implications, these findings suggest that it is imperative to make available evidence-based assessments that can screen at a number of levels and accurately identify those older drivers who are truly unsafe to drive, so that they can either self-regulate or cease driving, while those who are safe to drive can do so for as long as possible, thereby maintaining their own sense of independence and quality of life.

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**References**


