The present study aimed to:
- Examine relationships between age and performance on new driving-specific tests of executive function in a new virtual reality driving simulator
- Examine age differences in performance on these tests using two high risk groups of drivers – older adults and adolescents

We predicted:
- Age would be negatively associated with driving-specific executive function abilities
- Age would be positively associated with driving-specific executive function errors
- Older adults would make more errors due to age-related declines in executive function.

Participants

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean Age</th>
<th>Mean Education</th>
<th>% Female</th>
<th>% Caucasian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teen (20)</td>
<td>16</td>
<td>10 years</td>
<td>53</td>
<td>65</td>
</tr>
<tr>
<td>Old (15)</td>
<td>75</td>
<td>17 years</td>
<td>40</td>
<td>100</td>
</tr>
</tbody>
</table>

Apparatus

Novel Driving Simulator
- 210° field of view
- Side and rear view mirrors.
- Automatic and manual transmission
- Seatbelt, dashboard, steering wheel, turn signal, gas and brake controls
- Doppler sound presentation of engine, tire and traffic noises.
- Steering forced feedback simulated road texture and tire friction.

Results

Older adults had:
- Lower driving working memory capacity
- Higher response inhibition divided attention errors (hit more potholes during response inhibition and working memory tests)