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Data Article

Naturalistic speeding data: Drivers aged 75 years and older

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ABSTRACT

The data presented in this article are related to the research article entitled "A longitudinal investigation of the predictors of older drivers' speeding behavior" (Chevalier et al., 2016) [1], wherein these speed events were used to investigate older drivers speeding behavior and the influence of cognition, vision, functional decline, and self-reported citations and crashes on speeding behavior over a year of driving. Naturalistic speeding behavior data were collected for up to 52 weeks from volunteer drivers aged 75–94 years (median 80 years, 52% male) living in the suburban outskirts of Sydney. Driving data were collected using an in-vehicle monitoring device. Global Positioning System (GPS) data were recorded at each second and determined driving speed through triangulation of satellite collected location data. Driving speed data were linked with mapped speed zone data based on a service-provider database. To measure speeding

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behavior, speed events were defined as driving 1 km/h or more, with a 3% tolerance, above a single speed limit, averaged over 30 s. The data contains a row per 124,374 speed events. This article contains information about data processing and quality control.
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Specifications Table

Subject area	Road safety
More specific subject area	Speeding; older drivers
Type of data	Tables, figure
How data were acquired	The in-vehicle monitoring device consisted of a C4D Data Recorder with an external GPS receiver. The hardware included an internal tachograph, real-time clock, 128 MB of flash memory and internal battery (1300 mA). The GPS data were recorded at 1 Hz (each second) and determined driving speed through triangulation of satellite collected data. These data were linked with supplier-provided mapped speed zone data
Data format	Processed, assessed for quality control
Experimental factors	GPS data were linked with speed zone data
Experimental features	The definition developed for speed events and steps taken to process data to identify and validate these events are detailed below
Data source location	North-West Sydney
Data accessibility	The dataset is within this article

Value of the data

- Naturalistic methods are being used increasingly in road safety research, but little is known about the distribution of this type of data. The data provided in this manuscript may be used to calculate sample sizes for other studies investigating speeding behavior.
- Methodological considerations are reported including monitoring inactivity and quality control.
- This data could be considered for use in future meta-analysis combining this data about older drivers' speeding behavior with other datasets which include a broader range of age groups and other settings.

1. Data

The dataset contains a row per speed event (Supplementary Table 1). The variables within the dataset are described in Table 1. Fig. 1 depicts variability within two speed events that occurred in 60 km/h speed zones.

2. Experimental design, materials and methods

2.1. Participants

Volunteer participants were from the control group of a randomized control trial ($n=380$) [2] who agreed to have their vehicle instrumented ($n=182/190$). Participants were aged 75–94 years (median

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