COMBATING YOUTH SPEEDING: A TELEVISITED INTERVENTION APPROACH
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INTRODUCTION
Speeding is a significant issue for the young drivers of NSW. Despite 17–25 year-old drivers only representing 15% of licence holders during 2007, approximately 40% of all speeding controllers were identified as young drivers [1]. Young male drivers were particularly over-represented, being involved in approximately 25% of all speed-related crashes resulting in casualties; the equivalent statistic for young female drivers was 11% [1].

Current countermeasures against speeding involve a range of legislative and educational approaches, including televised anti-speeding advertisements. Empirical evaluation of anti-speeding advertisements has largely relied on measuring viewers’ intentions to comply with speed limits [e.g. 2, 3, and 4]; that is, none have measured their direct effects on actual driving behaviour.

The aim of the current study was to conduct the first empirical evaluation of anti-speeding advertisements, as measured by their immediate and long-term effects on young drivers’ speeding behaviour, using a driving simulator.

Based on speed-related crash statistics, we expected that young male drivers would spend more time speeding and that they would travel at higher speeds than their female counterparts prior to the intervention. While we were not sure what effects the anti-speeding advertisements would have on driving speeds, we predicted an immediate reduction in speeding behaviour, with these effects maintained at 7–10 days after viewing the advertisement.

METHODS
Overall, 137 licensed drivers (61 males, 76 females) participated in the study. Participants were aged 17–25 years (M = 19.80, SD = 1.74) and were students undertaking an undergraduate Psychology course at Macquarie University.

Five health-based advertisements were employed, including three anti-speeding advertisements (Notes: Youth speeding, Heaven and hell, and Speeding. No one thinks big of you), and two control advertisements (Artery and Five in five). In the prompt condition, presented during Phase 2, the first 3–4 s of each advertisement was used (i.e. the core message was absent). All of the advertisements had been televised in Australia within four years prior to the commencement of the study.

To control for any possible effects of the advertisements on mood, participants’ overall moods were measured at three intervals during the study (see Figure 1) using the Brief Mood Introspection Scale [BMIS; 5].

The driving performance of participants was recorded using a STISIM driving simulator (Model 400; STISIM Drive Interactive Simulator Software Version 2). Prior to their baseline test drive, participants completed a 1.3 km practice drive. Participants’ driving speeds were then assessed prior to, directly following, and 7–10 days after viewing one of the advertisements (see Figure 1). The three test drives, used to measure driving speeds, took participants through rural, suburban, and urban environments. The test drives were of equal distance (8 km) and the time spent in the 90 km/h zone approximated the time spent in each of the 50 km/h zones, whereby the distance of each zone was 4 km and 2 km, respectively. To minimise order effects, the three versions of the test drive were completed in a randomised order across participants.

RESULTS AND DISCUSSION
As expected, at baseline, young male drivers spent a larger percentage of their driving time speeding, had higher speed exceedance magnitudes and had higher average driving speeds when compared with their female counterparts.
Surprisingly, the anti-speeding advertisements did not appear to have any immediate effects on the frequency of young drivers’ speeding behaviour (see Figure 2A). In addition, at follow-up, young male drivers increased their frequency of speeding when compared with female drivers, irrespective of which advertisement they viewed.

While the anti-speeding advertisements did not reduce speeding frequency, Notes: Youth speeding reduced the degree to which young male drivers travelled over the speed limit, and the Speeding No one thinks big of you anti-speeding advertisement did so when compared with Artery (see Figure 2B). In addition, these reductions in speed exceedance magnitudes were maintained at follow-up. Interestingly, females’ speed exceedance magnitudes were not influenced by the anti-speeding advertisements used in this study, and the Heaven and hell advertisement did not reduce the speed exceedance magnitudes of young drivers (see Figure 2B).

Lastly, drivers’ average travelling speeds were reduced by the Speeding. No one thinks big of you anti-speeding advertisement when compared with the Five in five advertisement (see Figure 2C), and these reductions were maintained 7–10 days later.

Interestingly, changes in mood did not appear to have any influence over the changes in speeding behaviour. In addition, it appears that repeated exposure to the anti-speeding advertisements, via prompts, did not have any added benefit. However, the prompts appeared to suppress the tendency to increase speeding frequency at follow-up; that is, those who were not prompted (irrespective of which advertisement group they were in) increased their frequency of speeding at follow-up.

Future studies should include a challenging practice drive to minimise learning effects throughout test drives, as well as a more thorough examination of pre-exposure effects. Further manipulations could include a more subtle intervention phase (e.g. embed the advertisements within a short cartoon episode) and incorporating the advertisements’ core message in the prompts at follow-up. Lastly, research into speed-related behaviour change should examine the effects of anti-speeding advertisements on behaviour and attitudes concurrently, in order to examine their relationship, and to make connections with previous empirical studies.

CONCLUSIONS
The Heaven and hell anti-speeding advertisement appears to be ineffective in reducing the speeding behaviour of young drivers. Conversely, the Notes: Youth speeding and Speeding. No one thinks big of you anti-speeding advertisements appear to have modest effects on reducing the speeding behaviour of young drivers. However, their effects appear to be limited, and there is little support for their use in reducing the speeding behaviour of young female drivers.

REFERENCES