

DECREASING DRIVER SPEEDING ON A SIMULATED DRIVE WITH FEEDBACK AND REINFORCEMENT

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Background Research suggests that driver feedback combined with reinforcement can increase safe driving (ie, reduce speeding and tailgating). Although promising, it is currently unknown whether both feedback and reinforcement are required to increase safe driving or whether similar results could be achieved with just one of these components.

Aims/Objectives/Purpose We investigated the amount of speed reduction that could be achieved on a simulated drive with just one intervention component (ie, feedback alone or reinforcement alone) compared with feedback and reinforcement combined.

Methods Twenty-eight men (7 per group) aged 18–29 completed a 30-min simulated drive using a 2×2 design (feedback or not; reinforcement or not). Real-time feedback consisted of a dashboard device informing participants of their current speed relative to the speed limit using lights. Reinforcement consisted of drivers earning points for driving at or below the speed limit; points were later exchanged for a gift card, with its value determined by the number of points earned.

Results/Outcome Compared with control participants, drivers who received feedback combined with reinforcement spent less time driving above the speed limit, had a slower mean speed, and had a smaller SD of speed (all *p* values<0.05). Drivers exposed to reinforcement alone showed speed reductions similar to drivers who received both feedback and reinforcement. Drivers exposed to feedback alone drove at speeds similar to control participants.

Significance/Contribution to the Field Reinforcement alone was necessary and sufficient to achieve a reduction in drivers' speed. This information could be used to inform policy-makers and car manufacturers.