What doesn't work for young road users and why

Fear tactics

Outlined below is a summary of the research evidence that suggests fear appeals on their own are generally NOT effective in reducing risk taking behaviour.

Fear appeals typically show the negative health consequences of dangerous behaviours in order to motivate people to reduce or cease their current risky behaviour and adopt safer, alternative behaviours. Fear appeals can be in the form of advertisements, messages, images, testimonials, discussions or experiences[1].

What does the evidence show?

- A large body of research has found that, in general, fear appeals do not lead to positive behaviour change[2,3,4].

- Research has found that some people accept the fear appeal message, whereas others reject it[4,5,15]. However, those who are more likely to accept the message are not usually the ones engaging in the high-risk behaviour[16].

- Some research suggests that fear appeals may, in some instances, also lead to an increase in risky behaviour[6].

- An evaluation of a school program that tested the effect of testimonials from road crash victims on adolescent risky cycling behaviour, found that the program did not result in positive behaviour change[7].

- Reviews of the fear appeal research recommend that alternative behaviour change interventions should be employed[15, 17]. In particular, it is suggested that interventions should aim to increase self-efficacy to promote positive behaviour change[17,18, 19, 20].

- Evaluations of the effectiveness of trauma ward visits show mixed results. Two reported studies have found some positive effects[8,9], but two other studies have found that trauma ward visits had no effect on the behaviour of those who attended[10,11]. A meta-analysis of the PARTY program (which involves trauma ward visits) showed some positive effects of the program related to knowledge about the severity of injury but concluded that there is no evidence of long-term behavioural change associated with the program[14]. Due to the high costs and the impact that these programs can have on trauma ward patients, and the uncertain effects, these programs should be avoided.

- Many reviews of programs to take young offenders to prisons have consistently shown that this approach is ineffective in reducing offending behaviour. Further some evaluations found that those young offenders who participated in prison visits were more likely to re-offend than those who did not participate[12].

Why doesn't it work?

The main difficulty with fear appeals is that they seem to be least effective among those people who most need to change their behaviour. Less risky people who are already motivated to behave safely are more likely to accept the fear appeal message[13].

Additionally, for some people, fear appeals tend to invoke defensive mechanisms like[15]:

- denial ("that is not true");

- ridiculing the message ("as if that would happen")

- neutralising ("it won't happen to me") or

- minimising ("that message is exaggerated").

The finding that fear appeals don't seem to be effective in changing risky behaviour among young people seems to be consistent across a range of approaches and across both offending and non-offending groups of young people.

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Skill-based driver training

Skill-based driver training programs predominantly involve driving on off-road tracks or circuits and may also include the provision of information about traffic law, the risks of crashing and sometimes some emergency braking exercises.

What does the evidence show?

- Systematic evaluations of driving skill-based programs have all concluded that the programs have little or no positive effect on the road safety behaviour of the young people who participate in them[1,2,3,8].

- Some off-road programs for novice drivers, especially those that include skid control training, were found to either have no positive effect or, in some cases, have negative effects on those who completed them[4,6,7].

- In terms of helping learner drivers master basic skills, research suggests that the best learning environment for the beginning driver is the real road system under the supervision of an experienced driver or instructor[1].

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Why doesn't it work?

Skill-based driver training programs mainly focus on driving skills. While drivers need to master basic car control skills, this occurs relatively quickly. Providing too much emphasis on driving skills does not create better safety outcomes. Rather, it can lead to an increase in risky behaviours as some of the young drivers who complete these programs feel like they are more skilled than they had been previously[5]. As a result, their confidence and level of risk-taking as a driver increases, leading to a greater involvement in crashes. This is especially the case for young male drivers[1].

Driver skills training has also been associated with licensing at an earlier age, which is in and of itself known to increase crash risk[8].

Off-road driving programs are likely to be particularly unhelpful for higher-risk groups like young male offenders and these groups should not be encouraged or required to attend such programs.

While there might be some value in utilising off-road facilities for learners who are in the first stage of learning to drive can just as safely occur in an appropriate on-road environment, e.g., new housing estates and industrial estates on the weekend.

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One-off events

Some communities invite young people to participate in one-day events or forums. These may involve a range of speakers or personnel from emergency services, victims of road trauma, traffic offenders, and other related fields speaking to students about their role and experience of road trauma. Components of the sessions may include mock road crash scenarios or stories from traffic offenders and/or crash victims or their families.

What does the evidence show?

- Reviews of effective measures to reduce injury among young people have concluded that lasting behaviour change and, ultimately, a reduction in injuries experienced by young people is beyond the scope of one-off educational programs or information sessions / presentations[1,8].

- A review of crime prevention programs showed that one-off events can only ever be beneficial if they are part of an ongoing and multi-action approach to the problem, and they should be delivered by trained professionals[2].

- An Australian evaluation of a one-day, school-based program designed to improve road safety attitudes and risk perceptions among senior students using presentations from police officers and road trauma victims showed disappointing results. The program had no effect on risk perception, and students who participated in the program had riskier attitudes towards road safety rather than safer attitudes after completing the program[3].

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Why doesn't it work?

Many of these education programs and information sessions need to be fairly non-interactive, given the large numbers of students that are involved. Non-interactive programs that primarily emphasise knowledge acquisition or the negative effects of unsafe behaviours are unlikely to result in behaviour change[4].

Interactive programs that involve a discussion format to explore content have been found to be between two and four times more effective than non-interactive approaches[5]. Programs that build and increase the ability of students to act in safe ways when presented with opportunities to engage in risky behaviour allow them to develop resilience, refusal and coping skills. This is more effective than providing content or building knowledge in students. The effectiveness of such approaches relies on the program facilitators receiving appropriate and regular training[6].

Other shortcomings of this approach are that:

- Relying on a range of external presenters can be difficult, as it relies on the presenters having a sound understanding of effective health promotion approaches and being able to engage and interact with students, which requires specific training[2]. Presenters, e.g., emergency services, offenders, and victims, are not likely to be qualified for health promotion.

- Developing and coordinating the event and getting students to the event is very resource intensive, and limited resources could be used in more effective ways[7].

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Driver simulation

Low-grade driving simulators are promoted by some organisations as a road safety initiative for young people. Often using one or more computer-type screens or projections, driving simulators attempt to reproduce some or all of the perceptual experiences of driving a motor vehicle.

Another very low level of simulation used in some programs involves using fatal vision goggles or 'beer goggles'. The broad aim of using these goggles is that young people potentially experience the negative intoxication effects of drinking (blurred vision, loss of balance and coordination) and ultimately change their behaviours as a result.

What does the evidence show?

○ While simulation is a commonly used training tool in aviation, the application of low-level simulation as a training tool for driving has not been shown to be effective or there is no clear evidence for effectiveness[1,8,9,10].

○ Research shows that driving simulators cannot faithfully reproduce all the experiences of driving a real motor vehicle on a real road in real traffic[2], and performance on simulators has not been directly correlated with on-road performance[3].

○ It has been concluded that in most cases, using real cars on real roads is a cheaper, more realistic and more effective training method compared to building and using simulators[4].

○ An evaluation of the use of fatal vision goggles as part of a drink driving program for US College students found no change in the behaviour of the students who participated in the activity compared with those who did not[5].

Why doesn't it work?

The limitation of driving simulators as a training tool for learner drivers is that the learners may develop a set of expectations of other road users' behaviour based on their simulator experiences. Because the real-world driving environment is different to the simulator environment, this inconsistency could interfere with the development of safe driving skills in the learner[1].

Using goggles to simulate the effects of being drunk can have the unintended effect of trivialising or making being drunk seem like a fun activity. For students who have little experience with alcohol, highly interactive lessons may increase interest in alcohol use[6]. Such approaches may also inadvertently imply to young people that there is an expectation that all young people will, at some point, get drunk and act in an unsafe manner. This has the negative effect of normalising the unsafe behaviour[7].

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Membership or participation in car racing clubs/go carting

There are some programs that encourage young teenagers to participate in go-cart or sports car racing in controlled environments.

The rationale for these programs can vary. Some use it as a means of showing young people the power and danger of a car. Others believe that if young people can release some of their aggression on a track, they will be safer drivers in real traffic conditions.

What does the evidence show?

- Introducing children or adolescents to off-road, high-speed, skill-based driving via go-kart or car racing clubs is not likely to enhance the safety of the children and may increase their crash risk due to increased optimism bias[1] (i.e., they believe they are less likely than the average person to be involved in a crash while driving)

- A US study showed that drivers who belonged to car clubs had higher crash and violation rates (particularly for speeding) when driving on public roads[2].

- A more recent study in New Zealand examined the link between interest in motor racing and driver behaviour. It was found that young males who were more interested in legal motorsport events were more likely to engage in risky driving behaviours[3].

- An Australian study of adult males found that even for mature drivers, there is an association between interest in motor racing and less safe attitudes to speeding[4].

- A review of youth road safety programs found that education programs that teach vehicle handling skills only on off-road tracks/circuits are not an effective road safety intervention[5].

Why doesn't it work?

Young people, particularly males, erroneously equate high levels of vehicle control skill with being a good driver. Those who feel more skilled are more likely to drive at higher speeds and be unrealistically optimistic about their chances of avoiding a crash.

Males seem to be more susceptible to the 'speeding culture' of motor racing and this attitudinal impact may influence their later speeding violations for males[4].

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Information only approaches

Information-based programs primarily present the facts about road safety, and outline the negative consequences of unsafe behaviours in the hope of changing the behaviour of people who are already unsafe or preventing those from becoming unsafe while they are still young.

These approaches are popular in schools, at a community level and sometimes even in offender programs.

What does the evidence show?

- Injury prevention programs that primarily focus on providing information or knowledge to students about health behaviours have had little success in changing behaviour[6].

- Research evaluations of road safety programs[1] as well as the alcohol and drug education programs in schools[2] that focus on providing information only, have also been shown to have little success in changing behaviour.

- Information or education approaches, when used alone, are not effective in influencing the behaviour of traffic offenders[3].

Why doesn't it work?

Some information about safe driving and the licensing system is needed among young people and the general community. However, just providing information about safety, what is safe and what is dangerous or risky does not address the range of reasons why young people engage in risky behaviours.

There are a range of underlying motivations that can influence a young person to engage in risky behaviours. They can be influenced by what is normal in their social group, whether they believe they can change their behaviours and also whether they have the social skills and strategies to resist the appeal of certain risky behaviours[4].

One reason why just raising awareness of the risks is unsuccessful is that it appears that many adolescents are already aware of the risks of dangerous driving. Studies have shown adolescents who engaged in higher-risk activities are aware that they were at higher risk but engaged in those behaviours anyway[5].

As such, just providing these young people with information about the risks of unsafe behaviours does not prevent them from engaging in these behaviours.

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