EFFECTIVE COMMUNITY & SCHOOL BASED ROAD SAFETY FOR YOUNG PEOPLE

A SUMMARY OF THE RESEARCH

1. INTRODUCTION

Young drivers continue to be significantly over-represented in road crashes. The risk of crash involvement among young and novice drivers is due to factors that may include inexperience especially in complex driving situations, motivational factors, the effect of peers, and broader lifestyle factors across the young driver population.

Many community groups, schools and the general public are very concerned about the level of road trauma among young drivers, and are motivated to address this.

A number of detailed evaluations have been undertaken of a range of injury prevention initiatives and there is now a reasonable body of evidence from what is called the prevention sciences, about what works and what doesn't. Some of the key findings are outlined below.

The Victorian Community Road Safety Partnership Program

VRSERG
Victorian Road Safety Education Reference Group

State Government Victoria

2. APPROACHES THAT DON'T WORK

2.1 Information based programs

Most road safety programs that are implemented in schools and communities aim to prevent young people from being injured in road crashes. Injury prevention programs that primarily focus on providing information or knowledge to students about health behaviours have had little success in achieving positive behavioural change. Research evaluations of road safety programs (Christie, 2001) as well as the alcohol and drug education programs in schools (Gottfredson, 1997) have found the same results.

Some information about safe driving and the licensing system is needed and the delivery of this information can occur in a school or community setting. 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. Programs need to recognise the underlying motivations and expected outcomes of the risky behaviour and address these, as well as a range of other factors, such as the influence of social norms, the self-belief of the individuals to adopt certain behaviours as well as a young person's social skills and ability to adopt safer behavioural strategies (Niremberg et al, 2013).

One reason why just raising awareness of the risks is unsuccessful with young people is that it appears that many adolescents are already aware of the risks of dangerous driving. In a detailed review of adolescent risk taking across a range of health behaviours, Reyna and Farley (2006) reported that several studies have shown adolescents who engaged in higher-risk activities often seemed to be aware that they were at higher risk but engaged in those behaviours anyway. As such, a lack of risk awareness is not what is causing these young people to be risky.

2.2 One day or one off events

Some communities conduct one day events or forums that may involve a range of speakers or personnel from emergency services or related fields to speak to young people about their role and experience of road trauma and some may include mock road crash scenarios.

Many of these programs are fairly didactic in nature due to the large numbers of young people or school groups involved. They mostly aim to increase awareness of the dangers of high risk driving with the hope that this awareness will lead to less risky behaviours. However, this approach is not effective for the reasons outlined earlier. Other short-comings of this approach are that:

› One-day or one-off events can only ever be of value if they are integrated with a longer-term multi-faceted approach (Elkington et al, 2000).

› Relying on a range of external experts to provide information can be difficult, as it relies on the experts having a sound understanding of effective health promotion approaches, and being able to engage and interact with students, which requires them to undertake specific training (Gottfredson, 1997).

› Developing, promoting and co-ordinating the event and getting students and or young people to the event is very resource intensive and limited resources could be used in more effective ways (Rafferty & Wundersitz, 2011).

A recent evaluation of a one day school based program was undertaken by researchers from Griffith University (Glendon et al, 2014). The school based intervention they evaluated was designed to improve road safety attitudes and risk perceptions among senior secondary students. It was conducted over one day and featured presentations from police officers and road trauma victims. The evaluation compared the attitudes and risk perception of the students who completed the program with a control

group from another school. The results showed that the program had no effect on the student's risk perceptions, but rather than having safer attitudes, students who participated in the program showed riskier attitudes to road safety after completing the program. The authors commented that the single occasion delivery of the program, together with the reliance on guest speakers and some of the program content being based on fear appeals may have led to the disappointing results.

In a detailed review of effective measures to reduce injury among young people, Elkington et al (2000) concluded that lasting behaviour change and ultimately a reduction in injuries experienced by young people is beyond the scope of one-off educational programs.

2.3 Using fear appeals

Many road safety approaches have traditionally relied on fear based appeals. A fear appeal is defined as a persuasive communication attempting to arouse fear in order to promote a self-protective action (Witte, 1992). This can be in the form of advertisements, messages, images or discussions. Fear appeals are typically used in health campaigns to vividly show people the negative health consequences of life-endangering behaviours so people will be motivated to moderate their current risky behaviour and adopt safer alternative behaviours (Ruiter et al, 2001).

However, a large body of research has found that in general fear appeals do not lead to positive behaviour change (De Hoog et al, 2005, Lewis et al, 2007, Ruiter et al, 2001). Research has found that some people accept the fear appeal message, whereas others reject it (Witte & Allen, 2000; Ruiter et al, 2001). Those people who are already motivated to behave safely and who have high self-efficacy (i.e. they believe that they can behave in the desired way), are more likely to accept the fear appeal message and will be more likely to adopt the safer behaviour. However, these people are usually behaving in a safe manner already. In contrast, for some people fear appeals tend to

invoke defensive mechanisms like denial ("that is not true"); ridiculing the message, neutralising ("it won't happen to me") or minimising ("that message is exaggerated") (SWOV, 2011). It is not surprising that females seem to be more likely to accept fear appeal messages than males (Lewis et al, 2007). One study has found that fear appeals in some instances have led to an increase in risky behaviour (Taubman Ben-Ari, 2000).

Despite this, many programs that operate in schools and the community are broadly based on using fear appeals to try to change behavior.

Taking students or young offenders to visit trauma wards is becoming an increasingly popular program approach. Of the few evaluations that have been undertaken of these types of programs there have been mixed results. Utilising the resources of a hospital trauma ward is expensive and can raise some ethical issues in allowing students or young offenders to see patients who are not able to fully consent to participating in the program due to their injuries or illnesses. Such an approach would need to demonstrate very significant positive behavioural effects on a consistent basis to warrant the costs and imposition on patients. As this is not the case, these approaches are not recommended.

Some schools and community groups utilise programs that use fear appeals as part of their road safety education. An evaluation of a program that utilised testimonials from road crash victims that operates in The Netherlands has recently been undertaken by Maastricht University. This program, called "Traffic Informers" is delivered to students from years 9-11 and involves the screening of an 8 minute video featuring crash scenes and a 30 minute presentation from a road crash victim. The evaluation found that the program did not result in any self-reported behaviour changes and the authors concluded that the time and money spent on the program would be better spent on developing more effective programs (Feenstra et al, 2011).

2. APPROACHES THAT DON'T WORK (CONTINUED)

2.4 Some types of simulation activities

The use of driving simulators as a tool to assist young drivers is often suggested and low grade simulators are promoted by some community organisations as a road safety initiative for young people. While simulation is a commonly used training tool in aviation, the application of simulation as a training tool for driving has not been shown to be effective.

Driving simulators attempt to reproduce some or all of the perceptual experiences of driving a motor vehicle. Research shows that driving simulators cannot faithfully reproduce all the experiences of driving a real motor vehicle on a real road in real traffic (Johanssen & Nordin, 2002). It has been concluded that in most cases, using real cars on real roads is cheaper, more realistic and more effective in training terms than building and using simulators (Christie, 2008).

A very low level of simulation that is used in some road safety and alcohol prevention programs involves using fatal vision goggles or 'beer goggles'. The broad aim of activities using these goggles is that participants potentially experience the negative effects caused by drinking and ultimately change their views and behaviours as a result. However, an evaluation of this type of program for young people found that this prevention strategy is not effective in creating behavior change (Jewell and Hupp, 2005).

2.5 Driving skills programs

Driving programs mostly involve young people undertaking driving sessions on off-road tracks or circuits. These programs may be targeted at learner drivers, novice drivers or young offenders. Systematic evaluations of these programs have all concluded that the programs had little or no positive effect on the road safety behaviour of the students who participated in them (Christie, 2001; and Lonaro, 2008).

These programs were regarded to be ineffective because they predominately focus on driving skills. While it is acknowledged that all novice drivers need to master basic car control skills to become licensed and drive safely, providing an increasing emphasis on driving skills does not lead to better safety outcomes (Lonaro, 2008 and Christie, 2001). Other off-road programs for novice drivers, especially those that include skid control training were found to either have no positive effect or to have negative effects on those who completed them (Williams, 2006 and Hatakka et al, 2002). This outcome may have been due to the fact that some of the young drivers who completed these programs felt that they were more skilled drivers than they had been previously. As a result, their confidence and level of risk taking as a driver increased, leading to a greater involvement in crashes. This outcome was more evident in young male than young female drivers (Christie, 2001).

3. APPROACHES THAT DO WORK

A number of reviews into road safety education (SDERA, 2009) as well as those that have reviewed health education programs (Booth and Samdal, 1997) and crime prevention programs (Gottfredson, 1997) have concluded that the following approaches are the most effective.

3.1 In Schools

Effective school based road safety reflects the following approaches:

› A comprehensive approach

Road safety curriculum content needs to be provided on a regular basis over a child's school career to reinforce existing concepts and introduce new skills as children develop. One-off visits or incursions or activities, regardless of their content, will not lead to lasting outcomes if they are not part of an ongoing integrated approach.

The Victorian Road Safety Education Reference Group promotes a 'core and enrichment' approach to road safety education. This approach means that there are core programs designed for children from birth to 18 years and these programs have been designed to target key developmental points in road safety behaviour in children.

As well as the core programs, the Reference Group have endorsed a number of programs that are designed as 'enrichment' programs. It is intended that all Victorian schools utilise the core programs as a minimum and to implement some of the enrichment programs to enhance the learning and understanding of their students, teachers and school communities about road safety.

› Interactive programs

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 (Tobler and Stratton, 1997). Interactive programs that generate an exchange of ideas and experiences can provide a catalyst for change and opportunities to practice new skills and obtain feedback on the skills that are practised.

In Victoria, the core road safety education programs, as well as many of the enrichment programs are designed to be interactive and engaging for students.

› Focus on the social competency of the students:

Programs need to build and increase the competency of students to act in safe ways when presented with opportunities to engage in risky behaviour. This includes resistance-skills training to teach students about social influences and specific skills for effectively resisting these pressures alone or in combination with broader-based life-skills training. The aim of this is to help students develop resilience, refusal and coping skills. This is considered to be more effective than providing content or building knowledge in students that has not been found to lead to positive safety outcomes (Buckley et al, 2012). In a review of alcohol and drug programs it was noted that programs that focused on decision making skills, coping skills, practising life skills, challenging social norms and resistance skills were more effective (Cuijpers, 2002).

In Victorian schools, the social competency of students is addressed in the core Year 10 program, Traffic Safety Essentials, and in the Fit To Drive Program.

› Delivery and training of Educators

Trained educators have been found to be the most appropriate providers of health and safety programs in schools. Evaluations of some school based drug education programs have shown that programs operated solely by external providers such as emergency personnel have not been effective (Gottfredson, 1997).

Victoria has a range of support and training resources for schools and teachers in road safety education, and schools are encouraged to utilise these.

3. APPROACHES THAT DO WORK (CONTINUED)

› Whole school approach and capacity building

Schools need to develop a whole school approach to health behaviours and safety (SDERA, 2009). In the road safety context this can include:

- Establishing a whole school commitment to training and supporting staff to deliver programs related to safety.

- Creating links and expectations with parents about being good road safety role models.

- Creating links with the local community organisations that promote safety and health behaviours among young people.

- Having sound traffic management strategies around the school at drop off and pick up times.

- Having a school policy that considers safe transport options – like only using buses with seat belts etc.

› Encourage good school engagement and connectedness:

School connectedness, which is the extent to which students feel accepted and included within a school community, is positively associated with school retention and good emotional health and well-being and negatively associated with adolescents' involvement in risk-taking behaviours (Goodenow, 1993). Research has shown that students who had high levels of school connectedness were less likely to engage in risky behaviours, such as riding with dangerous drivers, with drink drivers and to engage in underage driving.

Good levels of school connectedness was found to be a protective factor for risk-taking behaviours extending beyond the school setting to after children had left high school completely (Chapman et al, 2011). Strategies most likely to enhance school connectedness include high expectations from teachers and parents for school performance and completion, consistent enforcement by school staff of collectively agreed upon disciplinary policies, effective classroom management, and having supportive and positive student–adult relationships within the school (Bergin and Bergin 2009; Voisin et al, 2005).

3.2 Working at a community level

While community based or population level road safety programs are common in Australia and many other countries, there are relatively few evaluations of community level programs addressing health behaviours in general (Jepson et al, 2010).

The available research indicates that many of the characteristics of programs that are effective at a community level mirror those that are effective in road safety education in schools. In particular, community based road safety initiatives need to be multi-faceted and be delivered consistently over a sustained period. They also need to be based on sound research and to utilise this in all of their approaches. In many instances, the most effective programs utilise proven programs and adapt them to suit their own community needs (Hallfors et al, 2002).

To improve the safety of young road users in local communities, groups should focus on:

› Researching the needs of the community and address these using planned approaches that rely on evidence based interventions.

› Promoting and implementing effective multi-faceted community wide programs and policies.

› Delivering consistent and sustained approaches that are more likely to change the safety culture of communities and, in turn, have a positive impact on the safety of community members.

› Taking measures to engage and inform key community leaders.

› Evaluating program outcomes.

4. CONTENT OF ROAD SAFETY PROGRAMS TARGETING YOUNG ROAD USERS

Several key road safety initiatives have been implemented to reduce the number of young driver crashes over recent years. The most significant of these has been a more graduated approach to licensing new drivers. Road safety programs for youth should inform, support and encourage these effective practices and policies.

4.1 The Graduated Licensing System

Victoria, like many other western countries, has introduced a Graduated Licensing System (GLS) for novice drivers. The Victorian system is one of the most comprehensive in the world, with requirements for young people to hold a Learner permit for a minimum of 12 months, to acquire 120 hours of supervised driving experience prior to licensing and hold their probationary licence for four years. The interim evaluation of the Victorian GLS has been very positive, with a 23% reduction in first year probationary driver crashes since the new GLS was introduced (Healy et al, 2012).

While school and community based programs aren't directly involved in designing or managing the licensing system, programs that support and encourage compliance with the GLS among students, parents and the broader community is likely to be beneficial (Williams, 2012). It is also important that any programs that are conducted in schools or the community do not encourage young people to get their probationary licence earlier (Peck, 2011).

4.2 Safer Vehicles

Another area of research emerging in recent years has been the importance of vehicle safety for young drivers and their passengers. Australian research estimates that if all young drivers killed or seriously injured in crashes over the past five years had been driving the safest vehicle of the same age as the one they were driving when they crashed there would be a reduction of death and serious injuries of more than 60 per cent (Whelan et al, 2009).

However, in many cases, young people and their families do not consider the safety of the vehicle when purchasing a first car. Informing young people and their parents about vehicle safety and encouraging the purchase of a safe vehicle is particularly important for the safety of young drivers.

4.3 Enforcement and deterrence

Victoria has a range of effective road safety laws, such as drink driving and seat-belt wearing laws that have reduced road trauma significantly over the last few decades. For laws to be effective, especially at a deterrent level, the relevant population groups need to be aware of the laws and they also need to understand and accept that there is a reasonable chance of detection if they breach these laws and that penalties for breaking the laws will be applied (Homel, 1986).

For young people, being aware of the relevant road safety laws, of the level of enforcement and of the legal consequences are important in creating the basis for effective enforcement systems. Providing this information to young people, especially if it supports effective laws, like the GLS, are likely to be worthwhile. Education both at a school and community level does have an important role to play in enabling and expanding interventions that work (McKenna, 2010). However, it is important that the program content is developmentally appropriate for the young people and also needs to be perceived as relevant by them (Buckley et al, 2012).

Developing programs for young people who are identified as "high risk" or who are serious traffic offenders requires understanding which young people are more risky than the average young person. Harrison (2011) reported that among young drivers, it is possible to identify subgroups of drivers that have a higher than average level of crash involvement or serious offending. Literature indicates that patterns of risky driving behaviour appear to be part of a broader pattern of problem behaviours (Smart et al, 2005), and drivers who engage in frequent unsafe driving behaviours also undertake behaviours that reflect an unsafe lifestyle (Blows et al, 2005).

5. ROAD SAFETY PROGRAMS FOR YOUNG OFFENDERS

It needs to be acknowledged that most of the literature about what is effective for high risk young people indicates that almost all of the effective interventions need to be delivered by highly skilled and trained professionals who specialise in this work. As such, involvement by community road safety groups in dealing with very high risk young people and young offenders may be limited. However, there is scope for community organisations to support some of this work through volunteering either to assist directly, or by providing funding or other ancillary support to the organisations conducting these specialist programs.

There is evidence to suggest that the following areas are more likely to be effective in assisting young high risk people and these should be supported by community road safety groups:

› Initiatives to reduce and limit social disadvantage in the driver licensing system by assisting and encouraging local L2P learner driver mentor programs.

› Community based programs that are designed to minimise general risk factors among young people – such as proven youth mentoring programs or preventative programs that encourage school completion and employment for at-risk young people (Tolan et al, 2009 and Broadbent & Papadopolous, 2009).

Community groups should also look for ways to support and acknowledge specialist groups and individuals who are working with high risk young people who are utilising proven measures. The most effective approaches to working with young offenders are cognitive-behavioural therapy (Andrews & Bonta, 2010), motivational interviewing (Nelson et al, 2008) and family based interventions (Greenwood, 2008).

6. CONCLUSIONS

The research on effective road safety approaches for young people indicates that communities should:

› Implement comprehensive programs that are delivered across age levels and across the curriculum.

› Ensure that programs that are delivered are interactive, age appropriate and engaging for students.

› Deliver programs, especially for teenagers, that focus on the social competence of students to assist them develop resilience, coping strategies, refusal skills and self-efficacy to behave in a safe manner.

› Build school capacity by supporting and training staff in the delivery of road safety material and ensuring that sound road safety practice is reflected in their school policies, practices and importantly in their engagement with parents and the local community.

› Be aware of the nature of effective programs and avoid or stop using any programs or approaches that are not effective.

Implementing programs that are not supported by evidence, no matter how intuitively appealing are a waste of precious resources and also mean that the opportunity to do something more effective is lost.

A number of detailed evaluations have been undertaken of a range of injury prevention initiatives and there is now a reasonable body of evidence from what is called the prevention sciences, about what works and what doesn't. It is critically important that only programs that are effective are used.

7. REFERENCES

Andrews, D. & Bonta, J. (2010) Rehabilitating criminal justice policy and practice, *Psychology, Public Policy, and Law, vol. 16*, 1, pp. 9–55.

Bergin, C. & Bergin, D. (2009) Attachment in the classroom, *Educational Psychology Review, vol. 21*, pp. 141–170.

Blows, S., Ameratunga, S., Ivers, R., Lo, S. & Norton, R. (2005) Risky driving habits and motor vehicle driver injury, *Accident Analysis and Prevention, vol. 37*, pp. 619–624.

Booth, M. & Samdal, O. (1997) Health-promoting schools in Australia: models and measurement, *Australian and New Zealand Journal of Public Health, vol. 21*, 4, pp. 365-370.

Broadbent, R. & Papadopoulos, T. (2009) Community education and youth mentoring: how to build good practice?, *Australian Journal of Adult Learning, vol. 49*, 2, pp. 319-351.

Buckley, L. (2012) *Identification Of Curriculum Content For Peer Discussion Materials*, Unpublished VicRoads Report.

Chapman, R., Buckley, L., Sheehan, M., Shochet, I. & Romaniuk, M. (2011) The impact of school connectedness on violent behavior, transport risk-taking behaviour, and associated injuries in adolescence. *Journal of School Psychology, vol. 49*, 4, pp. 399-410.

Christie, R. (2001) The Effectiveness of Driver Training as a Road Safety Measure: A Review of the Literature, RACV Report 01/03.

Christie, R. (2008) Driving Simulators, Paper prepared for the TAC by Dr Ron Christie.

Cuijpers, P. (2002) Peer-led and adult-led school drug prevention, *Journal of Drug Education, vol. 7*, pp. 107-119.

De Hoog, N., Stroebe, W. & De Wit, J. (2005) The impact of fear appeals on processing and acceptance of action recommendations, *Personality and Social Psychology Bulletin, vol. 31*, 1, pp. 24-33.

Dragutinovic, N. & Twisk, D. (2006) The effectiveness of road safety education: *A literature review.* Leidschendam, The Netherlands: SWOV Institute for Road Safety Research.

Elkington J., Hunter K. & Makay, L. (2000) A systematic review of the evidence on preventing injuries to young people (15-24 years). Youthsafe www.youthsafe.org.

Feenstra, H., Ruiter, R. & Kok, G. (2011) Evaluating Traffic Informers: Testing the behavioural and social cognitive effects of a traffic safety education program for adolescents, PhD Doctoral Thesis.

Glendon, A., McNally, B., Jarvis, A., Chalmers, S. & Salisbury, R. (2014) Evaluating a novice driver and pre-driver road safety intervention, *Accident Analysis and Prevention, vol. 64*, pp. 100-110.

Goodenow, C. (1993) The psychological sense of school membership among adolescents: scale development and educational correlates, *Psychology in the Schools, vol. 30*, pp. 79–90.

Gottfredson, D. (1997) School Based Crime Prevention, In Sherman, Gottfredson, Layton, McKenzie, Reuter, Bushway. *Preventing Crime: What Works, What Doesn't, What's Promising, A Report to the United States Congress.* College Park, MD: University of Maryland, Department of Criminology and Criminal Justice.

Greenwood, P. (2008) Prevention and Intervention Programs for Juvenile Offenders, *The Future of Children, vol. 18*, 2, pp. 185-210.

Hallfors, D., Cho, H., Livert, D. & Kadushin, K. (2002) Fighting back against substance abuse: Are community coalitions winning? *American Journal of Preventive Medicine, vol. 23*, 4, pp. 237–245.

Harrison, W. (2011) *Identification of risky young drivers*, unpublished report prepared by Eastern Professional Services for VicRoads, Melbourne.

Hatakka, M., Keskinen, E., Gregersen, N. P., Glad, A. & Hernetkoski, K. (2002) From control of the vehicle to personal self-control; broadening the perspectives to driver education. Transportation Research, Part F, 201-215.

Healy, D., Catchpole, J. & Harrison, W. (2012) *Victoria's graduated licensing system evaluation: Interim report.*

Homel R. (1986) *Policing the drinking driver: random breath testing and the process of deterrence.* Canberra: Federal Office of Road Safety.

Jepson, R., Harris, F., Platt, S. & Tannahill, C. (2011) The effectiveness of interventions to change six health behaviours: a review of reviews, *BMC Public Health, vol.10*, pp. 538-554.

Jewell, J. & Hupp, S. (2005) Examining the Effects of Fatal Vision Goggles on Changing Attitudes and Behaviors Related to Drinking and Driving, The Journal of Primary Prevention, vol. 26, 6, pp. 553-565.

Johanssen, M. & Nordin, J. (2002) *A survey of driving simulators and their suitability for testing Volvo cars*. Goteborg, Sweden: Department of Machine & vehicle systems, Chalmers University of Technology.

Lewis, I., Watson, B. & Tay, R. (2007) Examining the effectiveness of physical threats in road safety advertising: The role of the third-person effect, gender, and age. *Transportation Research Part F: Traffic Psychology and Behaviour, vol. 10*, 1, pp. 48-60.

Lonaro, L. (2008) Trends in Driver Education and Training, *American Journal of Preventive Medicine, vol. 35*, 3S, pp. 316-323.

McKenna, F. (2010) Education in Road Safety – are we getting it right? RAC Foundation Report 10/113.

Nelson, P., Baird, J., Mello, M., Nirenberg, T., Woolard, R., Bendtsen, P. & Longabaugh, R. (2008) A systematic review of emergency care brief alcohol interventions for injury patients, *Journal of Substance Abuse Treatment, vol. 35*, 2, pp. 184–201.

Nirenberg,T., Baird, J., Longabaugh, R. & Mello, M. (2013) Motivational counselling reduces future police charges in court referred youth, *Accident Analysis and Prevention, vol. 53*, pp. 89-99.

Peck, R. (2011) Do driver training programs reduce crashes and traffic violations? — A critical examination of the literature, *IATSS Research, vol. 34*, pp. 63–71.

Rafferty, S. & Wundersitz, L. (2011) *The efficacy of road safety education in schools: A review of current approaches*, Centre for Automotive Safety Research. Report no. CASR077. Adelaide, South Australia.

Reyna, V. & Farley, F. (2006) Risk and rationality in adolescent decision-making: implications for theory, practice, and public policy, *Psychological Science in the Public Interest, vol. 7*, pp. 1–44.

Ruiter, R., Abraham, C. & Kok, G. (2001) Scary warning and rational precautions: a review of the psychology of fear appeals, *Psychology & Health, vol. 16*, 6, pp. 613-630.

SDERA (2009) *Principles for School Road Safety Education: A Research Summary*, Government of Western Australia, School Drug Education and Road Aware, 2009.

Smart, D., Vasalla, S., Sanson, A., Cockfield, S., Harris, A., Harrison, W. & McIntye, A. (2005) *In the Driver's Seat: Understanding young adults' driving behaviour*, AIFS Research Report No. 12, May 2005.

SWOV (2011) Fear-based information campaigns Fact Sheet, www.swov.nl/rapport/Factsheets/UK/FS_Fear_appeals.pdf

Taubman Ben-Ari, O., Florian, V. & Miculincer, M. (2000) Does a threat appeal moderate reckless driving? A terror management theory perspective, *Accident Analysis and Prevention, vol. 32*, 1, pp. 1-10.

Tobler, N. & Stratton, H. (1997) Effectiveness of School-based drug prevention programs: A meta-analysis of the research, *Journal of Primary Prevention, vol. 18*, pp. 71-128.

Tolan, P., Henry, D., Schoeny, M. & Bass, A. (2008) Mentoring interventions to affect juvenile delinquency and associated problems, *Campbell Systematic Reviews* 2008:16 DOI: 10.4073/csr.2008.16.

Whelan, M., Scully, J. & Newstead, S. (2009) *Vehicle safety and young drivers Stages 2 and 3: Analysis of young driver crash types and vehicle choice optimisation*, Monash University Accident Research Centre - Report No. 292.

Williams, A. (2006) Young driver risk factors: successful and unsuccessful approaches for dealing with them and an agenda for the future, *Injury Prevention, vol. 12*, pp. i4-i8.

Williams, A., Tefft, B. & Grabowski, J. (2012) Graduated Driver Licensing Research, 2010–Present, *Journal of Safety Research, vol. 43*, (3), pp. 195-203

Witte, K. (1992) Putting the fear back into fear appeals: the extended parallel process model. *Communication Monographs, vol. 59*, 4, pp. 329-349.

Witte, K. & Allen, M. (2000) A meta-analysis of fear appeals: Implications for effective public health campaigns, *Health, Education & Behaviour, vol. 27*, 5, pp. 608-632.