

Motivating behaviour change among young drivers: Recent findings on developmental issues and the role of parents

Senserrick, T.M.

Injury Division, The George Institute for International Health

Abstract

Young drivers are the most over-represented group in injury crash statistics, predominantly due to their inexperience; yet several factors that contribute to their over-representation fall under volitional control. Over the past decade, there has been increasing research support for biologically-driven explanations of this greater vulnerability to crashes. Better understanding of developmental and crash risk factors by youth and their parents could improve engagement and compliance with behaviour change programs. Parental involvement has been found to have a powerful impact on youth risk-taking behaviour for a variety of youth risk activities. Parent initiatives associated with reduced driving risks include general parental monitoring and written agreements on driving-related restrictions. Recently, in-vehicle monitoring equipment has become available to parents, which might also support improved parental involvement if utilised in a supportive, authoritative manner. It is argued that implementation and evaluation of 'best practice' recommendations in these fields offers a promising direction to further reduce young driver road trauma.

Keywords

Young Drivers, Behaviour Change, Development, Parents

Young driver risk

In Australia, as in other high income countries, young people are the most over-represented age group in road traffic crashes and fatalities (ATSB, 2004; Twisk & Stacey, 2007; Williams, 2003). While inexperience is a leading cause of young driver crashes, several other contributing risk factors fall under volitional control (Senserrick, 2006). Compared to adults, young people drive more during the high risk nighttime hours and experience a greater risk of crash when driving under the influence of any level of alcohol and when driving with peer passengers (Keall, Frith, & Patterson, 2004; Lam, Norton, Woodward, Connor, & Ameratunga, 2003; Vollrath, Meilinger, & Kruger, 2002; Williams, 2001, 2003; Zador, Krawchuk, & Voas, 2000). They are also more likely to undertake risky driving behaviours, especially young males (Blows, Ameratunga, Ivers, Lo, & Norton, 2005; Fergusson, Swain-Campbell, & Horwood, 2003; Sakashita, Graham, de Roos, Croft, & Elliott, 2007).

Developmental factors

Over the past decade, there has been increasing research support for biologically-driven explanations of young drivers' greater vulnerability to crashes. Adolescence marks the onset of many developmental changes; physical, cognitive and psychosocial (Keating & Halpern-Felsher, 2008). Changes in brain development, which continue into the early 20s, result in slower maturation of the higher-order cortical centres that control planning and decision-making and reduce the ability to exert control over impulse drives underlying sensation seeking (Chambers, Taylor, & Potenza, 2003; Dahl, 2003; Fuster, 2002; Spear, 2002). Changes in circadian rhythms and a phase shift in melatonin release increase the need for

sleep, but effective sleep cannot be achieved until later at night, increasing the likelihood of fatigued driving (Carskadon, 2006; Carskadon, Mindell, & Drake, 2006; National Sleep Foundation, 2000). Thinking becomes more abstract and less concrete and the need for autonomy grows, which is coupled with an increase in the importance of peers (Keating & Halpern-Felsher, 2008). A recent article by Keating and Halpern-Felsher (2008) explore the impacts of these changes on young drivers' ability to develop expertise and competent self-regulation in relation to driving, particularly self-regulation of perceived driving risks.

Educational needs

While general messages about the increased crash risk of young drivers and the importance of restraint use and abstinence from drink driving are well known among young people and the community generally (Ginsburg et al., 2008; Pennay, 2006), the role of inexperience, developmental factors and the small fractions of seconds that differentiate between a crash and near crash (Senserrick, 2006) are less well known, not only among young people but also their parents (and more broadly in the community). Anecdotally (through media reports and general discussion), there are community perceptions that only youth who engage in high risk behaviours, such as excessive speeding, reckless and aggressive driving or driving after drug and alcohol use are at increased risk. Better understanding of these issues and why all young, novice drivers are at risk could improve engagement and compliance with behaviour change interventions by both parents.

Parental Involvement

Parental involvement during adolescence has a powerful role in reducing risk-taking among youth for a variety of risk activities, including smoking, alcohol and other drug use, sexual activity and also driving risks. Having parents who communicate their values, set clear expectations, monitor their children's activities (locations, companions and time expected home) and set clear consequences for non-compliance has been repeatedly associated with higher perceptions of risk and reduced risky behaviours (Crouter & Head, 2002; Keating & Halpern-Felsher, 2008; Kerr & Stattin, 2000; Simons-Morton & Ouimet, 2006; Stanton & Burns, 2003). In relation to driving risks, written agreements that clearly detail expectations of driving-related restrictions and when restrictions will be eased have been shown to increase adoption of those restrictions, to reduce negotiated risky driving behaviours and also to reduce offences and crashes (Doane & Griffith, 2000; Keating & Halpern-Felsher, 2008; Simons-Morton, Ouimet, & Catalano, 2008).

For most young people, parents play a pivotal role in teaching them to drive and providing them access to a vehicle (influencing the age and type of vehicle driven), as well as covering costs associated with insurance, maintenance and even fuel (The Children's Hospital of Philadelphia and State Farm, 2007), which all impact on their driving exposure. In fact, young drivers who have access to their own vehicle have been shown to take more driving risks and have an increased risk of crash (Senserrick et al., 2007). Therefore, a key role for parents to reduce crash risk is to delay car ownership and monitor access to a vehicle and the type of driving undertaken during the early provisional driving period. To this end, in-vehicle monitoring equipment is readily available on the market, which has the potential to improve driving behaviour (McGehee, Raby, Carney, Lee, & Reyes, 2007); however, few studies have been conducted with parents, nor have parental guidelines been developed to promote effective use of the equipment from a supportive, authoritative approach rather than in a

counterproductive, authoritarian manner (Simons-Morton et al., 2008; Stanton & Burns, 2003).

Conclusions & Recommendations

Considerable advances have been made in recent years in our understanding of young driver risk, including developmental changes during adolescence and the role of parents; as well as in reductions in young driver crashes and road trauma. Research suggests, however, that young females have most benefited from these advances, with the fatal crash risk of young males actually increasing (Twisk & Stacey, 2007). Furthermore, while graduated driver licensing initiatives have contributed considerably to crash reductions, they are not a panacea (Williams, 2006). More needs to be done to increase compliance with licensing initiatives, but also to develop programs and initiatives beyond graduated licensing, including programs to better inform and engage parents and young people themselves. Development and evaluation of such initiatives based on current 'best practice' should include programs to better educate parents and youth on the role of developmental factors and inexperience in crashes and the key role of parents in achieving behaviour change among young drivers; including appropriate tools and strategies to effect that learning. Such initiatives offer a promising direction in reducing the over-involvement of young people in road trauma.

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