

LITERATURE REVIEW

Introduction

Young, novice drivers are markedly over-represented in crashes internationally (Lonero, L. *et. al.*, 1995). Although teenagers accounted for only 10 percent of the US population in 1998, they are disproportionately represented in motor vehicle death rates, accounting for 14 percent of all the drivers involved in fatal motor vehicle crashes and 16 percent of all drivers involved in police-reported crashes in the same year (IIHS, 2000a; NHTSA, 1998b). Teenagers are not only at risk behind the wheel, but as passengers as well: 62 percent of teenage passenger deaths in 1998 occurred in crashes in which another teenager was driving (IIHS, 2000c). Sixteen to 19 year old drivers have the highest crash rates compared with drivers of all other ages, whether the rate is based on miles driven, number of licensed drivers, or per capita (Ferguson, S.A. *et. al.*, 1996), and were found by a 1995 study to have 3 times the risk of involvement in a fatal crash and 3.3 times the risk of involvement in injury crashes when compared to all drivers overall (Massie, Campbell, and Williams, 1995).

The factors that influence the skills, abilities, performance, and decisions any driver makes when behind the wheel are numerous and complex. Experiential, developmental, psychosocial, and personality factors have all been cited and studied as contributing factors to the performance of young drivers. However, the reciprocity among the factors is undeniable, and it is not reasonable to consider any one factor without also considering how it interacts with the many other influential variables. In considering young, novice drivers these factors can best be broken down into two broad categories, immaturity/youthful age and inexperience, both fundamental characteristics of adolescence that often make young drivers less capable and less cautious, placing them at increased risk for crashes, injury, and death.

The Young Driver: A Profile

Young Driver Skills and Abilities

Driving is a complicated mix of cognitive, perceptual, and psychomotor tasks. In addition to the cognitive processes involved in the driving task, a proficient driver must have mastery of the necessary performance skills, organized into three levels: the control of the vehicle (*operational*), maneuvering of the vehicle (*guidance*), and planning (*navigational*) (COMSIS Corporation and the Johns Hopkins University, 1995). The driver must continuously scan the environment, assimilate the information to assess potential situations, hazards, and risks, and develop appropriate response strategies to those conditions.

New technologies such as magnetic resonance imaging have revealed that the adolescent brain is far from mature, meaning that adolescents do not have the emotional, mental, and physical abilities of an adult. The prefrontal cortex, the site of judgment formation and acting CEO of the brain, is not fully developed until the late teens. Researchers currently believe that the excess of synapses and the unfinished development of the prefrontal cortex have numerous impacts on adolescent cognitions, including: difficulty keeping track of multiple thoughts; delayed access to

critical memories and emotions that allow grown-ups to make judicious decisions; and difficulty organizing several tasks. In addition, it now appears that the process of myelination B coating of the nerve cells, which enables faster and more efficient travel of nerve impulses B is not completed until the early 20s. Some of those nerves that become sheathed during adolescence are those that connect areas of the brain that regulate emotion, judgment, and impulse control (Brownlee, 1999).

These dynamic neurological conditions have pronounced effects on the skills and abilities of young drivers: they are less able to maintain full attention to the driving task and less likely to take in the information they need from the driving environment. Experienced drivers are better at scanning the environment, recognizing potential hazards while they are still at a safe distance, and making tough decisions quickly. This lack of complete neurological development manifests in young drivers in that they tend to underestimate the danger of certain risky situations and overestimate the danger in others (Lonero, L., *et. al.* 1995).

Young Drivers' Choices and Behavior

Crashes involving young drivers are most often single-vehicle crashes, primarily run-off-the-road crashes, that involve driver error and/or speeding (IIHS, 1999). In 1998, 41 percent of the 16-year-old drivers and 37 percent of 17-19 year old drivers involved in fatal crashes involved only the teenager's vehicle (IIHS, 2000b). Most of novice drivers' increased risk comes from inappropriate driving behavior B deliberately taking risky actions, thrill seeking, driving at high-speeds, and driving while impaired. Novice drivers more often choose to drive too fast, follow other vehicles too closely, run yellow lights more often, accept smaller gaps in traffic, and allow less room for safety (Lonero, L., *et. al.* 1995).

Much of what people learn about the driving task and driving situations is based upon reasoning processes (Eby, D.W. and Molnar, L.J., 1998). Since young drivers are lacking in experience behind the wheel, they do not have a significant referent of driving experiences on which to draw and then apply to immediate situations. This is apparent in that inexperienced young drivers are more likely to make delayed, rather than anticipatory avoidance responses (COMSIS Corporation and the Johns Hopkins University, 1995).

Also critical to understanding the decisions of young drivers behind the wheel is consideration of adolescent motivations. Lonero cited the two main causes of crashes among young beginning drivers as their limited ability to perceive hazards and judge risks, and a lack of motivation to avoid risks. On the contrary, young drivers may be motivated to seek risks and the benefits they perceive that come from them (Lonero, L.P., 1998). Intrinsic in every driver's decision to drive is a willingness to accept a certain amount of risk as a trade off for the benefits of mobility. Among young drivers, thrill seeking or impressing friends are usually stronger motives for young drivers. *Sensation seeking* behavior can be defined as "the seeking of varied, novel, complex, and *intense* sensations and experiences, and the willingness to take physical, social, *legal*, and *financial* risks for the sake of such experiences." (Eby, D.W. and Molnar, L.J., 1998, citing Zuckerman, 1994). Numerous studies have documented increased tendencies for sensation seeking behavior in adolescents up to about 16-19 years of age, and then decreasing gradually through the life span. Young drivers, therefore, may drive recklessly for one or more reasons, including: limited ability to

perceive risks; to impress a potential partner; to compete with peers or others; to fit into a group; or to experience a situation in which physiological arousal will be elevated (Eby, D.W. and Molnar, L.J., 1998).

Hazard/Risk Perception, Risk Evaluation, and Risk Acceptance

In the course of everyday living, everyone both engages in activities and is exposed to situations that have some chance of a negative outcome. People's thoughts about these risks and how they assess them have been termed risk perception and hazard perception. Risk taking then refers to behaviors and the processes involved in making those behavioral choices that can potentially result in some form of loss (COMSIS Corporation and the Johns Hopkins University, 1995). As with many cognitive tasks, people evaluate risk and uncertainty when making decisions behind the wheel. As a group, young drivers take between five and seven years to reach mature risk levels (Lonero, L., *et. al.*, 1995).

For many people the period of adolescence is considered to be synonymous with risk taking. Young drivers' misperceptions of risk include a decreased likelihood of recognizing and appreciating a potential hazard, overestimation of their own ability to control the situation, and less personal vulnerability should a crash occur. Several factors emerge from the research as particular problems among young drivers, the major theme being that young drivers have a tendency to report less risk across situations in general. Specifically, they tend to associate less risk with high speed, be less influenced by warnings and markings, associate less risk with tailgating, see less deterioration in their performance due to alcohol use, be less sensitive to or anticipating of distant or emerging hazards, and see less risk on rural roads. Young drivers also tend to see themselves as less likely to be in a crash than other drivers in their own age group. Overall, young drivers tend to see less risk in situations where reflexes or vehicle handling skills are important (COMSIS Corporation and the Johns Hopkins University, 1995). Risk tolerance and risk perception interact in inextricable ways with driver skills to determine the risk behaviors of young drivers. The themes discussed here regarding youth perceptions of risk raise the important and difficult question of why young drivers engage in riskier practices, whether it is caused by a failure to perceive risky situations and potential hazards, or by greater acceptance of risk. This is a question that remains without a simple or clearly defined answer.

The Needs of the Young Driver

Young drivers in the United States vary widely in cultural background, life situations, skills, abilities, motivation, level of experience and crash risk (Lonero, L., *et. al.*, 1995). Developing effective education, licensing, and support programs for young drivers must take into consideration not only the significant variations in those factors, but also: individual learning preferences; individual autonomy; social adjustment and social norms; economic utility; personal values, attitudes, and beliefs; risk mentality; other health protective behaviors; family/guardian involvement; peer influences; incentives; community education and involvement; and the dynamic cognitive development during adolescence (attention, learning, reasoning, problem solving and decision

making, social cognition, attitude formation and change, and moral development) (Lonerio, L., *et. al.*, 1995; Lonerio, L.P., 1998; Eby, D.W. and Molnar, L.J., 1995; NHTSA, 1994).

Policies and Programs for Young Drivers

Driver Education

In recent years driver education has come under significant scrutiny and attack for its apparent inability to produce novice drivers with better driving performance records than those who do not receive formal training. Since the early 1980s many high school driver education programs have been dropped (Eby, D.W. and Molnar, L.J., 1995) because early evaluations of the effectiveness of driver education programs have suffered from weak methodology (Mattox, J.L., 1997). The past two decades have seen renewed evaluations and stronger assessment methodologies. No Federal requirements for driver education programs currently exist. Instead driver education is regulated by states, but even then requirements can be minimal and vary widely from state to state (NHTSA, 1994).

Expectations and Goals of Driver Education

The traditional intention of driver education seems straightforward: to eliminate the excess risk of novice drivers by teaching them the skills necessary to perform the driving task. Indeed, driver education has great potential for reducing crashes among novice drivers. However, despite widespread enrollment in and support for driver education, early evaluations of the effectiveness of driver education in reducing novice driver crash rates have not demonstrated the expected results (Mattox, J.R., 1997; NHTSA, 1994). In developing the Novice Driver Education Model Curriculum for the American Automobile Association (discussed in detail below), Lonerio and colleagues identified three broad and inconsistent driver education missions in North America:

Mission 1 B To support safety outcomes

Mission 2 B To support the mobility of new drivers

Mission 3 B To support broader educational out-comes and societal values (Lonerio, L., *et. al.*, 1995).

Based on their review of existing driver education missions and curricula, in their development of the Novice Driver Education Model Curriculum, Lonerio and colleagues suggest a revised definition of driver education:

*An organized set of educational experiences and other influences during the transition from novice to experienced driver, intended to enhance abilities relevant to driving and influence actual performance throughout the driver's career (Lonerio, L., *et. al.*, 1995).*

This broad definition operates on several assumptions: 1) new drivers need to be taught psychomotor and cognitive skills to handle a vehicle and interact with other road users adequately; 2) there are educable qualities that will support the development of these skills; 3) improved training of driving skills is necessary but not sufficient for driver education to better achieve its safety mission.

The DeKalb County Driver Education Project

The most comprehensive evaluation of a beginner driver education program is the DeKalb County Driver Education Project, initiated in the DeKalb County School District in Georgia beginning in 1976. Two driver education curriculums, one a model research curriculum (SPC) and the other an abbreviated version of the model program (PDL), were tested against no driver education in four sites across different geographic regions of the county, involving more than 5,000 students per year, through 1978. The most significant result of those analysis were:

1983 results:

- Random assignment of students to training or no training showed no significant differences between the mean number of crashes or convictions for students who received training (SPC and PDL combined) compared to students who did not receive formal training.
- For all practical purposes. There was no significant reduction in crashed or traffic violations for those students who received training compared to students who did not receive formal training.

1987 results:

- There were no significant reductions for SPC students in the number of crashes as compared to control students.
- Both SPC and PDL male students had significantly fewer convictions during their first six years of driving than did controls.
- In a reanalysis of the DeKalb data, Lund et. al found that students who were assigned to the SPC were significantly more likely to obtain drivers' licenses, be in collisions, and have traffic violations. This was not the case for PDL students (Goehring, J.B., 1999; Lonero, L., *et. al.*, 1995; NHTSA, 1994).

As a result of this study, many driver education programs lost much, if not all, of the government support, contributing to the decline in driver education availability in the last 15 years (Goehring, J.B., 1999).

Impact of Elimination of State Subsidies for Driver Education

Separate from concerns that driver education fails to achieve its objective of producing safer, novice drivers is the assertion that driver education may in fact *cause* harm by inducing increased exposure to risk. Studies of varying licensing practices in different states have shown that such variation may indeed lead to differences in the age at which young drivers get learner's permits and

licenses, as well as teen crash rates (Ferguson, S.A., Leaf, W.A., Williams, A.F. and Preusser, D.F., 1996). The availability and accessibility of driver education may encourage young people to start driving, and consequently crashing, at earlier ages than if driver education were not readily available or accessible. Robertson (1980) examined the outcomes associated with the elimination of Connecticut state subsidies for driver education in high schools when nine school boards decided to discontinue offering driver education courses in high schools, and other communities continued to offer them. According to Robertson's report, communities which lost driver education in schools saw a 57 percent drop in the number of licensed years of 16- and 17-year old driver education graduates, compared to 9 percent in communities that continued to offer driver education. While unaffected communities showed no change in collisions among 16- and 17-year old driver education graduates, affected communities showed a 63 percent *decrease* in collisions among 16- and 17-year old driver education graduates.

Novice Driver Education Curriculum Model Outline (Lonerio, L., et. al., 1995)

In 1995, the American Automobile Association sponsored a project to "reinvent" driver education into a form that reduces crashes by novice drivers. The research team conducted an extensive review of current driver education literature to identify novice driver needs, evaluate methods of instruction, and assess the effectiveness of driver education in influence behavior. Following their review they proposed performance objectives for driver education graduates and methods for achieving those objectives. In addition to developing a model outline for a driver education curriculum, Lonerio's team identified a broad range of stakeholders with varying needs and interests in producing safer, young drivers, and a host of needs and themes in driver education as identified by state education and school board/district officials with responsibility for driver education. These themes and needs are divided into seven broad categories with potential to shape the restructuring of driver education curricula and delivery: the process of driver education delivers; outcome objectives driver education should aim to achieve; barriers to change; incentives to ease restructuring; additional resources; integration and extension of education curricula into other disciplines with common linkages and goals; and external influences.

The curriculum model outline was developed based on identification of: 1) what is lacking in the behavior of novice drivers that needs to be corrected; 2) what growth in ability and character needs to be encouraged; and 3) what *educable qualities* will support these changes. These assumptions dictate the content, objectives, and methods of instruction. The resulting curriculum seeks to achieve the driver education goals by developing ten critical *educable qualities* in novice drivers: motivation; knowledge; attention; detection; perception; evaluation; decision; motor skill; safety margin; and responsibility. Within each category of educable qualities are related clusters of performance objectives, or desired driving achievements. The AAA report also discusses in-depth: how the methods identified above can be shaped to the goals of driver education and to accommodate the needs, conditions, and resources of different programs; building instructional media units; instructional delivery; refocusing driver education resources; educating motivation and responsibility; and planning and evaluation.

Licensing Programs, Policies, and Restrictions

In addition to driver education requirements, licensing policies and procedures also vary widely among states, ranging from the minimum age at which young drivers are allowed to enter the licensing system, to the existence and duration of the learner's permit stage, to restrictions placed on young licensed drivers. In fact, in the United States, there are 51 separate licensing systems, with significant variation among them (Williams, 2000). Although not always clearly articulated, in setting licensing policies states are deciding how to balance the tradeoff between safety for both young drivers and others that share the roads with them, and the mobility needs and desires of young people (Williams, A.F. and Sweedler, B.M.). In recent years studies of crash data for young, newly licensed drivers has led to new licensure policies and restrictions.

Young Driver Restrictions

Operating under the assumption that the lure of a driver's license is an incentive for many young people, many states are now linking the driving privilege to school attendance and performance. Although school attendance requirements do not directly relate to driving safety, a number of states have a requirement in place prior to issuance of a learner's permit or a driver's license. These requirements vary from state to state, but include proof of enrollment and/or good standing in school (at least 15 states), proof of regular attendance at school, and penalties including license suspension or revocation for students with chronic truancy problems or who drop out, (Goehring, J.B., 1999).

According to analysis of 1993 Fatal Accident Reporting System (FARS) data, of 1,269 deaths in 16-year-old driver fatal crashes in 1993, 447 were deaths of passengers in the 16-year-old drivers' vehicles, 367 of which were teenagers between 13 and 19 years old. Sixteen-year-old drivers with teenage passengers in fatal crashes were shown to have higher occupancy rates in their vehicles than did older drivers; 54 percent of 16-year-old drivers were carrying teenage passengers only, and 23 percent had two or more teenage passengers in their vehicles when the fatal crash occurred (Williams, A.F., Preusser, D.F., Ulmer, R.G., and Weinstein, H.B., 1995). Another 1998 study found that 16-year-old drivers have the highest percentage of fatal crash involvement when traveling with passengers (Preusser, D.F., Ferguson, S.A., and Williams, A.F., 1998), and according to the Insurance Institute for Highway Safety (2000b) almost two out of every three teens who died as passengers in 1998 crashes were in vehicles driven by other teens, especially 16-year-olds. The presence of teenage passengers can not only provide distraction from the driving task, but also encourage riskier driving by teenage drivers (Williams, A.F., Preusser, D.F., Ulmer, R.G., and Weinstein, H.B., 1995). Passenger restrictions are not in effect in all states, nor are they the same from one state to the next (U.S. Licensing Systems for Young Drivers, 2000).

Driving after drinking alcohol has also been a long-time concern with regard to young drivers. According to a longitudinal study conducted by O'Malley and Wagenaar (1991), combined across all states that increased the drinking age to 21 (from 18, 19, or 20) under federal pressures in the later 1980s, there was a significant decline in single-vehicle nighttime fatal automobile crashes among drivers under 21 years of age. In examining characteristics of fatal crashes involving 16-year-old drivers, Williams, Preusser, Ulmer, and Weinstein (1995) found that 16-year olds were less likely to

have been drinking alcoholic beverages prior to a fatal crash than were older teenage drivers; only 10 percent of fatally injured 16-year-old drivers had positive blood alcohol concentrations (BACs).

According to 1998 data, among drivers 16-20 years old (who are not legally permitted to buy alcohol), 22 percent of fatally injured drivers had BACs at or above 0.10 percent. The good news is that this figure is down from 49 percent in 1980, the greatest decline among all drivers (IIHS, 2000a).

All 50 states and the District of Columbia have established lower BAC thresholds that are illegal per se for drivers younger than 21. The National Highway Traffic Safety Administration (NHTSA) and law enforcement agencies across the country are now supporting “zero tolerance” alcohol laws for underage drivers who use alcohol. This policy ensures that underage drivers who are caught driving with a BAC over .00, .01, or .02, depending on the state, will be found guilty of impaired driving and will face severe penalties (NHTSA, 1997).

Graduated Licensing

Graduated licensing, sometimes referred to as Provisional licensing, has become an increasingly popular approach to reducing young drivers’ risk of collisions by gradually introducing young drivers to the driving task and the driving system. Young drivers begin the learning process with some restrictions, such as when, where, and with whom they may drive; these restrictions are lifted and full driving privileges are phased in as the young driver acquires and successfully demonstrates safe driving practices and experiences. Graduated licensing occurs in three phases: an initial period where only supervised driving is allowed, an intermediate stage with restrictions on unsupervised driving (such as high risk conditions: at night and with passengers), and a full-privilege license available upon successful demonstration of driving competency without crashes or traffic violations during the first two stages. The philosophy behind graduated licensing is that it addresses the two major factors that put young drivers at greater risk: inexperience and immaturity. Graduated licensing allows novice drivers practice in developing driving skills over an extended period of time, with increased time in supervised behind-the-wheel training during daylight and nighttime hours, leading to greater experience, maturity, and judgment (NHTSA, 1998a). Graduated licensing has twin goals: to encourage beginning drivers to acquire significant experience under supervision, and to prohibit unsupervised driving in high-risk situations (Williams, A.F., and Mayhew, D.R., 1999).

The NHTSA efforts to develop and evaluate graduated licensing began in the 1970s, and resulted in a model entry system for novice drivers in 1976 (Williams, 2000). This licensing system has been adopted by the American Association of Motor Vehicle Administrators, and recommended to their member states (NHTSA, 1994). In January 1999 the Insurance Institute for Highway Safety released a report, *Graduated Licensing: A Blueprint for North America*, identifying specific recommendations and optimal provisions as to how graduated licensing programs should be designed and implemented (Williams, A.F., and Mayhew, D.R., 1999; U.S. Licensing Systems for Young Drivers, 2000). As of June 23, 2000, 32 jurisdictions within the United States have three-stage graduated systems either in place, or passed in legislation to take effect in the near future) (U.S. Licensing Systems for Young Drivers, 2000). No jurisdiction satisfies all elements of the recommended optimal provisions.

Graduated Driver Education

In many jurisdictions that have adopted graduated licensing, the traditional driver education curriculum does not fit well into the multi-staged model. NHTSA has recommended a two-stage driver education program to better match graduated licensing, where learning would be spread over extended periods, the minimum being over a two-staged driver education program. The first stage of driver education would occur during the first phase of a graduated program when the driver holds a learner's permit. At this stage, driver education would provide only initial instruction, focusing on the basic skills associated with vehicle handling, and essential safety concerns. After a year of experience between a learner's permit and an intermediate/provisional license, the second phase of driver education would focus on safe driving skills and procedures, including perceptual and decision making skills (NHTSA, 1994; Williams, 2000). As of March 2000 Michigan is the only state in the U.S. to have adopted a version of NHTSA's two-stage driver education program (Williams, 2000).

Developing Supporting Influences for Young Novice Drivers

Repeatedly emphasized in the literature on young drivers is the role of parents in influencing young drivers, as family intervention can take advantage of the family's strengths in influencing early driving behavior (Lonero, L. *et. al.*, 1995). A recent study by the Insurance Institute for Highway Safety found that teenage sons or daughters of parents who have crashed their cars are likely to have crashed also. Accordingly, the more crashes the parent has had, the greater the likelihood that the teen will have crashed (Ferguson, S.A., 1999). There is also evidence from other studies to suggest that driving behaviors including risky driving behaviors are learned in childhood through observation of adult drivers, cartoons, commercials, and movies. Modeling of these risky behaviors has manifested as a type of cultural norm: risky driving on the roadways (Goehring, J.B., 1999). These results are particularly interesting in light of the national movement towards graduated driver licensing systems that place heavy emphasis on parents as both role models and coaches to young drivers. IIHS recommends a minimum of 30-50 hours of supervised driving, preferably with a parent or guardian. As of June 2000, 28 jurisdictions in the United States require supervised driving as a part of the learner stage of a graduated licensing program (U.S. Licensing Systems for Young Drivers, 2000).

Peer influence on young driver behaviors is also a critical factor in developing safe young drivers. As discussed earlier, teenage passengers can have distracting effects on young drivers, taking attention away from the driving task, and encourage risky behaviors in peer drivers. A series of three studies documented the effects of curriculum-based peer intervention programs to prevent drinking and driving among youth. Results suggested that program participants reported significantly more intervention behaviors. Together, these three studies suggested that youth are often willing to intervene to make their friends safer (Mattox, J.R., 1997). Ideally, young drivers themselves should take leadership roles, along with community health and services leaders.

Communities can also provide supportive influences for young drivers. As suggested by Lonero and colleagues (1995), resources and expertise to support coordinated influence programs could be provided through a variety of local, state, and national organizations, such as public health

authorities, auto clubs, insurers, trade associations, law enforcement, Healthy Communities programs, workplace health and safety organizations, and youth organizations.

Emerging Ideas

As driver education and licensing programs move away from the traditional models of yesterday, professionals are embracing new and innovative ideas and methodologies for helping to produce safe, young drivers. Technology, insurance companies, and increased emphasis on parental involvement in young driver training are all areas for emerging ideas to improve young driver safety.

On the front line of emerging innovations are interactive, computer-based driving simulators which can facilitate self-paced learning for novice students by providing equivalent optional paths through the learning process, with continuous diagnosis, evaluation, and feedback (Lonerio, L., *et. al.*, 1995), such as the AAA Foundation for Traffic Safety's driver-Zed, an interactive, multimedia, computer-based risk recognition and management program, or Profiler, developed by SouthPeak Interactive, SAS Institute, and Profile Associates. Another avenue of emerging ideas is behavioral contracts between parents and teens in which driving is viewed as a privilege, not a right, and together parents and teens establish rules and guidelines for the new driver. A wealth of books and video tapes is also available, commercially or through insurance or driving companies, designed to facilitate parental involvement in young driver training, including such titles as: *Safe Young Drivers: A Guide for Parents and Teens* (Phil Berardelli); *Teaching Your Teen to Drive, Without Driving Each Other Crazy!* (MetLife Auto and Home); *New Driver Car Control: From Kamikaze to Competent* and accompanying 45-minute video and *The Road Map B A Complete Plan for Teaching Your Teen to Drive* (both from Advanced Car Control Techniques). Similarly, information for and about the young driver abounds on the Internet, ranging from *Online Study Guide for Student Drivers* (<http://golocalnet.net/drive>), a site designed for drivers and students studying for the learner's permit and/or the driver's license, to other sites offer information about and tips for young drivers, such as www.drivers.com and www.teendriving.com.

Another powerful force of influencing the behavior of new drivers consists of insurance companies, many of which have offered incentives in the form of insurance premium discounts for those young drivers who have completed a driver education course, maintain a "B" average or better in school, or maintain a driving record free of traffic violations, crashes, and claims. Beginning young drivers face insurance premiums as much as 365 percent of the premiums of insured drivers age 25 or over pay for similar coverage (Malfetti, J.L., 1993). In the study of young driver insurance records, AAA Malfetti (1993) explored young driver motivational systems and possible interactions with insurance companies, that the expectations that young drivers will have crashes and are high-risk clients have only perpetuated the problem of risky young drivers, pointing to the social norms theory that people who are placed in categories can then be encouraged to act out the expectations assigned to that category. The researchers then suggest several avenues insurance companies can pursue to positively influence young driver behaviors and performances by developing policies and premiums that tap into the attitudinal and motivational systems of young drivers, and are more personal, using a system of positive expectations of young drivers' behavior.

Looking Ahead

The question of how to produce safer young drivers has no clear-cut answer. The driving task draws on complex cognitive, perceptual, and psychomotor skills, which are not fully developed in adolescents. The driving behaviors demonstrated by young drivers reflect immaturity. Population projections from 1996 crash data predict that unless effective intervention strategies are developed and implemented, the numbers of teen driver involved in non-fatal and fatal crashes will only go up (NHTSA, 1998a). Driving is a skill that improves with time, experience, and maturity. In order to improve the performance and minimize crash involvement rates of young drivers, significant strides need to be taken in development of adaptive and experiential driving education programs; interactive computer-based tools to facilitate driving instruction; multi-staged driver education programs that allow new drivers to gain on-the-road experience in controlled, lower-risk settings; peer-to-peer programs to enhance motivation and minimize engagement in risky behaviors; specific roles for parental involvement in training their young drivers; community programs that demonstrate and reinforce the value of safe, young drivers. Governments, communities, parents and researchers need to explore and embrace emerging ideas and strategies for not only producing safe beginning, young drivers, but also developing supporting influences for young, novice drivers.

References:

All references cited are incorporated at the conclusion of the extensive Literature Review, included as an appendix to this Study.