

**Summary:**

## **Influencing subgroups of young drivers and their passengers.**

### **Motivational influences of personality traits on risk-taking attitudes and driving behaviour.**

In Norway, as well as in many other countries, traffic accidents are one of the greatest threats against adolescents' health. Young Norwegian drivers are found to have 10-15 times as high a risk of being involved in traffic accidents compared to other drivers, and more than every fourth Norwegian driver who is involved in traffic accidents resulting in physical injuries is 24 years of age or younger. The high accident rate indicates that traffic safety promotion may be of particular relevance to young drivers.

One way of influencing safer driving practices is through the use of public road safety campaigns. The effect of such campaigns has, however, been questioned. Several literature reviews have concluded that the majority of traffic safety campaigns aimed at influencing drivers' attitudes or behaviour have failed to document any effects on the number of accidents. The supposed influence of attitudes on driving behaviour has also been questioned. On the other hand, a meta-analysis carried out recently suggests that campaigns be the most efficient measure to improve safety on the roads. This suggests that road safety campaigns still may be a useful mean for promoting road safety.

There may be several reasons for the campaigns' apparent lack of success, as well as the uncertain relation between attitudes, driving behaviour and traffic accidents. This thesis aims at giving a more thoroughly insight into the dimensionality of adolescents attitudes to traffic safety, as well as the association between attitudes and driving behaviour. The motivations underlying attitudes and behaviour are also studied in terms of the correspondence between personality traits and young drivers' safety orientation in traffic. Finally, the role of adolescent passengers as "guardian angels" is addressed.

The present thesis consists of four studies. The first study aims at developing a reliable and valid measure of adolescents' risk-taking attitudes and how such a measure relates to driving behaviour and accident involvement. The second study investigates how personality dispositions are related to adolescents' safety orientation in traffic. The third study aims at identifying reliable and valid subtypes of young drivers on the basis of personality characteristics. The fourth study has a different point of departure, focusing on the role of adolescent passengers rather than the drivers. This last study examines factors that may enhance or prevent adolescent passengers to promote safe driving among their peer drivers.

The results of study 1 demonstrated that adolescents' attitudes towards risk-taking in traffic were multidimensional. The reported attitudes on the dimensions demonstrated that adolescents think differently concerning these aspects of traffic safety. On some dimensions, most adolescents report quite ideal attitudes concerning safety, on other dimensions the picture is the opposite. The attitude dimensions identified were related to both risk-taking behaviour in traffic and accident involvement. However, the influence of the various dimensions on behaviour differed in magnitude. This implies that some dimensions were more important predictors of behaviour than others. Thus, the attitude dimensions with the highest correspondence with self-reported behaviour could be given special attention when traffic safety programs are carried out.

The results of study 2 suggested that the relation between the personality traits and driving violations was mediated through attitudes. On this basis it was concluded that personality traits primarily influence risky driving behaviour indirectly through affecting the attitudinal determinants of the behaviour. This suggests that deeper-lying motivations represented as personality traits is reflected in adolescents' attitudes towards traffic safety. A practical implication of the results would be to acknowledge the importance of personality traits in traffic safety campaigns. Consequently, the messages of attitude campaigns could be tailored according to certain personality characteristic, in order to appeal to high-risk drivers. However, if risk-taking attitudes are partly a consequence of permanent motivational factors, this implies that drivers' risk-taking attitudes may be difficult to change through traditional mass-media campaigns.

Study 3 identified six subtypes of young drivers on the basis of a cluster analysis of personality measures. The subtypes were found to differ on self-reported risky driving behaviour, attitudes towards traffic safety, risk perception, estimation of own driving skills, and accident involvement. Two of the subtypes were identified as high-risk groups in traffic. The subtypes were also found to differ on how they evaluated and responded to a traffic safety campaign. The results indicated that the campaign seemed to appeal most to the low-risk subtypes and least to the high-risk subtypes. Gender differences within each subtype were also found on the different traffic related measures, as well as on response to the campaign. It is concluded that young drivers should not be treated as a homogenous group pertaining to road safety.

Study 4 showed that there were several factors influencing adolescents' willingness to address risky driving. Females were in general most likely to report that they spoke out to the driver when feeling unsafe in the car. Males seemed to perceive more negative consequences of addressing unsafe drives, to be less confident in their ability to influence an unsafe driver, to be more likely to accept risk taking from other drivers, and perceive less risk than females. In turn, these beliefs affected the likelihood of confronting an unsafe driver. The results also demonstrated that a relatively large proportion of the adolescents thought that it is acceptable to ride with an unsafe driver. This kind of belief lessened the likelihood of addressing unsafe driving, as well as being most prominent among passengers who ride with friends with risky driving habits.

Possible implications of the results of the four studies for both driver-focused and peer-focused interventions aimed at promoting road safety are discussed.