

Summary:

Youths' development in attitudes, driver behaviour and accidents

Background

Young drivers are more at risk in road traffic than other drivers. However, the accident risk is reduced significantly during the first few months after acquiring the driver's license. Various explanations have been proposed in the scientific literature for this reduction in accident risk among young drivers. The two main explanations concern age, maturation and risk seeking on one hand, and learning and experience as a driver on the other hand.

Relying on the robust scientific finding that young drivers are at increased accident risk compared to other drivers, the Institute of Transport Economics (TØI) has – commissioned by the Norwegian Public Roads Administration – investigated the development in youths' attitudes, driving behaviour, and accident involvement.

Methods

Data were collected by means of self-report questionnaire surveys in two different samples. Invitation to participate in a questionnaire survey (questionnaire A) was sent to 16-year olds, i.e. youth old enough to start the driver education. A follow up questionnaire (questionnaire B) was sent to the same sample after approximately one year, in the spring 2010. At this time, the respondents were approaching the age when they could obtain the driver's license. Invitation to participate was also sent to another sample (questionnaire C). These respondents were 18 years old and all of them had just acquired their driver's license. A follow up survey was conducted after approximately two years (questionnaire D), when these respondents were more experienced drivers.

Respondents answering both questionnaire A and questionnaire B were included in sample A/B (N=1318), and respondents answering both questionnaire C and questionnaire D were included in sample C/D (982).

Driver education

In Norway, one has to attend a theoretical course before being allowed to start driving practice and acquire the driver's license. In order to investigate who tries for the driver's license at the age of 18 (i.e. immediately after turning 18 when

they are allowed to drive), we looked at differences between those who had attended the theoretical course and those who had not attended the course.

Not having access to a car in the family household, having parents with non-Norwegian background, and having non-working parents were associated with not having attended the theoretical driving course.

As for having attended the driving course, but not started further driving practice, we found that not having access to car in the family, having non-working parents, and living in a big city, were significant predictors.

Thus, the results indicate that family resources is a predictor of how soon after turning 18 youths obtain the driver's license.

Personality and attitudes

During the age period covered by this study, youngsters experience development and change both at a general and personal level, and in particular with respect to attitudes towards traffic and driving. In this project, we have investigated such changes and development, linking it to effects of age per se, having been through driving practice and acquired the driver's license, and to driving experience.

In general, there was little change in the personality variables over time. As for the few instances of change that could be observed, these indicated that the respondents became somewhat more safety oriented with time. Moreover, these changes were stable from questionnaire A (16 years) via questionnaire B (18 years) to questionnaire D (20 years).

As for attitudes towards traffic safety, the results indicate quite clear differences between the young men and the young women. Men were for instance more positive than women towards driving faster than the speed limit in certain given situations. Moreover, both men and women became more "pragmatic" with respect to traffic rules with age and experience. The results also indicate an effect of driver education, as there is a change in a 'positive' direction when it comes to disagreeing with statements such as: "The association between speed and accidents is not as strong as is commonly believed".

It is indicated that both age/maturation, having been through the driver education, and gaining experience as a driver, have effect on the development in attitudes.

Driving behaviour

We also found changes in driving behaviour – both in violations, errors and lapses, and behaviour indicating interaction with other drivers.

The young men reported to do more violations than the young women, whereas the women reported more instances of errors and lapses with regard to use of the instrumentation in the car. Moreover, both men and women report fewer errors and lapses, however more violations, when they are more experienced than when they were novice drivers.

Youths and accidents

We have investigated various aspects of youth accidents.

First, we addressed the question of whether or not there are persons who are more accident prone than others. We found that for young men, there was a significant tendency showing that a higher percentage of those who reported to have been involved in an accident in questionnaire D (2010), had also been involved in an accident during the period covered by questionnaire C.

Second, as found in previous research, running-off-the-road accident was a frequent accident type among young drivers. In particular this was evident for the novice drivers in questionnaire C; off-the-road accident was by far the most frequent accident type in this survey, and also constituted a significantly higher percentage of the accidents in questionnaire C (novice drivers) than in questionnaire D (experienced drivers). Moreover, off-the-road accidents were associated with higher frequency of speeding violations, indicating that this type of accident is a typical "youth accident with high speed".

The most evident explanation of the decreased accident risk during the first months of having a driver's license is experience. However, it is not clear what part(s) of experience have an effect on the reduced accident risk.

Considering the observed changes in driving behaviour documented in this report, it would be tempting to conclude that the increased pragmatic traffic orientation, increased interaction with other drivers and hereby also increased frequency of violations, have the effect of reducing the accident risk. However, there is no indication of such effects in the present material. On a general note, few of the driving behaviour variables were associated with accident risk. The few findings indicated, however, that increased frequency of violations was associated with increased risk. In addition, having been involved in an accident previously and having a moped driving license were significantly associated with increased accident risk. Being high on neurotism was associated with decreased accident risk.