

Summary

Evaluation of training for moped and light motorcycle riders

Pre-intervention study

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The Norwegian training curriculum for moped and light motorcycle riders was changed in 2017, and this report presents a pre-intervention study for assessing effects of the changes. Analyses of register data show that the mean age for completing mandatory training is 15.5 years for moped and 16 years for light motorcycle. This means that most riders get their license as soon as they reach the minimum age of 16 years. A survey among approximately 800 moped and 1100 light motorcycle riders who had passed the licensing test in 2016 showed that only 15% of moped riders had more than two training lessons beyond the mandatory part, compared to 59% of light motorcycle riders. The survey showed mainly positive attitudes regarding various road safety items and a low prevalence of risk-taking behaviour in traffic, except for speeding and moped tuning for increased power. About one-third of moped riders owned a tuned moped. Light motorcycle riders, however, reported more speeding behaviour than moped riders. This could be related to a considerably larger proportion of males among light motorcycle riders than among moped riders. Analyses of accident register data showed that number of crashes per vehicle per year has decreased considerably since 2004 for both mopeds and light motorcycles. However, as many as 22% of moped riders and 27% of light motorcycle riders are involved in crashes during their first year after getting the license. Average annual driving distance is considerably larger for light motorcycles than for mopeds, so in terms of crashes per driving distance, the risk is highest for mopeds.

The background for this study is a change implemented from January 1st, 2017, in the training curriculum for moped and light motorcycle riders (license categories AM146 and A1), including among other elements a mandatory four-lesson course on safe driving in traffic. This study is a pre-intervention study with the purpose of providing results that can be compared to results from a post-intervention evaluation in about three to five years.

The study consists of three parts. The first part is a web-based survey among persons who got their license for either moped or light motorcycle in 2016; i.e. before the curriculum was changed. The samples were drawn from the license register of the Norwegian Public Roads Administration (NPRA), and the riders received an invitation letter by post, with a link to the survey website. Eight hundred moped riders and 1127 light motorcycle riders completed the survey; this corresponds to 27% and 36%, respectively, of those who received the invitation letter.

The second part is an analysis of the NPRA register of approval of each mandatory part of driver and rider training. The purpose was to determine training duration and the age at which riders completed the various parts of the training.

The third part is analyses of crash involvement, based on personal injury crash statistics from Statistics Norway, the property damage crash register TRAST from the association of Norwegian insurance companies, and self-reported crashes from the survey.

Almost all moped and light motorcycle riders are younger than 18 years when they get licensed. Those vehicles therefore seem to be primarily alternative means of transport for people too young for car driving. We do not however know from this study the share of

riders who continue using moped and light motorcycle also after the age of 18, or to what extent they switch to car or larger motorcycle (category A2 or A). The mean age when passing the licensing test is slightly higher among light motorcycle than among moped riders. Age at completion of mandatory training is about 16 years for light motorcycle and about 15 ½ years for moped riders. The difference may be related to the possibility in some parts of the country to take moped training as a part of the lower secondary school curriculum, whereas there is no such possibility for light motorcycle. There is a large majority of males among light motorcycle riders, whereas the gender distribution is more equal among moped riders.

A larger number of non-mandatory training lessons among light motorcycle than among moped riders indicates that both novice riders and traffic school teachers consider riding a light motorcycle a more challenging or complex task than riding a moped.

The survey responses show mainly positive attitudes to road safety. For example, relatively few drivers (around 4%) agree to statements like “Persons with good driving skills can take more risks” or “Traffic rules must be violated to improve traffic flow”.

Regarding statements referring to self-reported risk-taking behaviour, the responses are similar to what was found for attitude statements. Speeding behaviour is, however, a negative exception. Almost one-third of light motorcycle riders agree to the statement “I try sometimes to drive as fast as I can...”. The findings thus seem to indicate a discrepancy between attitudes and behaviour regarding speeding.

Among moped riders, tuning the engine to enable driving above the legal maximum speed of 45 km/h seems to be very widespread, and more than half of the riders have used a tuned moped at least once. Tuning is less frequent among light motorcycle riders, but also in this group more than one-third have used a tuned motorcycle some time.

Use of protective clothing is more prevalent among light motorcycle than moped riders. The proportions using protective clothing often or always when riding are 67% and 23%, respectively.

Less than half of the riders think it is easy to predict other road users’ behaviour in traffic. This may indicate that many of them have an insufficient understanding of social interaction in traffic, and it could be related to limited experience as motorised road users. We should keep in mind that all respondents had held a license for less than two years.

On most of the survey items, mean responses differed little between moped and light motorcycle riders. There is, however, a tendency in the direction of less positive safety attitudes and more risk-taking behaviour among light motorcycle riders than among moped riders. This may possibly be the result of a considerably larger share of males among light motorcycle riders.

The crash risk for both moped and light motorcycle, in terms of personal injury crashes per number of registered vehicles, decreased steadily in the period 2004-2010 (Figure S-1). After 2010, there has been a more moderate decrease for mopeds and practically no change for light motorcycles.

For property damage crashes reported to insurance companies, number of crashes per vehicle has been rather stable for mopeds from 2005 to 2013, followed by a slight decrease. For light motorcycles there was a decrease from 2001 to 2007 and a rather stable level after that.

For self-reported crashes we have computed risk also in terms of crashes per licensed driver per year, and we find that yearly crash involvement is 22% for moped riders and 27% for light motorcycle riders. It should be noted that average annual driving distance is about twice as large for light motorcycles compared to mopeds, so the actual risk (crashes per distance driven) is considerably lower for light motorcycle than for moped. It should

also be noted that since the riders in the survey are all novice riders, the figures for annual crash involvement is probably higher than we would find if we included the whole population of moped and light motorcycle riders.

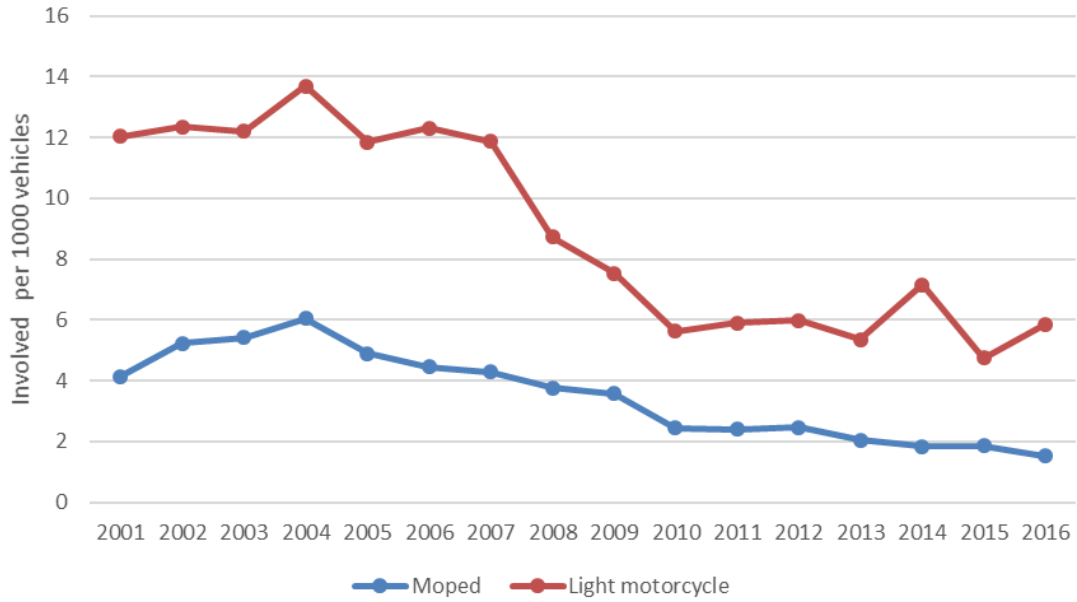


Figure S-1. mopeds and light motorcycles involved in personal injury crashes 2001-2016, by year and vehicle category. Involved units per 1000 vehicles.

Finally, we would like to point out that it may be difficult to interpret the present results in terms of the level of road safety among moped and light motorcycle riders, since the study is cross-sectional and there is no control group. However, the main purpose has been to provide baseline data for comparison with results from a post-intervention study. The results will be more meaningfully interpreted in conjunction with the eventual post-intervention study.