



Traffic Culture, Risks and Driving Behavior Among Adolescent ATV/UTV-users in Norway.

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Introduction

Many adolescents in rural and small-town areas in Norway use terrain vehicles like ATVs and UTVs for transport and leisure on public roads, but there has been little research on their driving behavior and risks. This study investigates how they are at risk in traffic, and how social norms and traffic culture affect risk-taking behavior among adolescents. The two research questions this paper will try to answer are:

- 1: What is the significance of adolescents in rural areas having a motorized vehicle at their disposal?
- 2: How do social norms affect adolescents' driving behavior and risk-taking?

ATVs and UTVs are commonly used in farming and industrial settings, but also for personal transportation and leisure use, particularly in rural areas, and several countries have reported a high number of fatal and non-fatal injuries related to ATV and UTV use (Adil, Konstantinou, Porter, & Dolan, 2017; Fawcett, Tsang, Taheri, Belton, & Widder, 2016; Khorsandi et al., 2021). The number of ATV/UTVs in Norway has risen substantially in the last decade, the accident rate is high, and the majority of the victims are men in the age group 17-19 (Iversen & Njå, 2022).

The most common risk factors are riding with a passenger on a vehicle designed for one person, driving on public tarmac roads with vehicles and tires designed for terrain driving, children riding vehicles designed for adults, lack of formal training, lack of safety equipment, high speed, driving on steep slopes and hills, and modifying the vehicle (Qin, Denning, & Jennissen, 2019). Helmet use and other aspects of driving style can be a matter of social norms within a group. Social norms are in this context understood as unwritten rules for how to behave in a social group (Irwin, Mihulkova, Berkeley, & Tone, 2022). Members of a given social group will have certain frames of reference in common, and this can cause an individual to behave similarly to the other members of the group (Raaheim, 2019). Teenagers are more prone to risk-taking behavior when they are together with peers than when they are alone (Westaby & Lowe, 2005). What teenagers are willing to do and not is often affected by what is accepted in their social circle, and risk-taking among young men and women is often modeled after influential persons in their social environment (Sorensen et al., 2011).

Research Methodology

We conducted seven focus group interviews in five different locations in Norway with ATV and UTV users in the age group 16-18 and five focus group interviews with their parents in



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separate sessions, and eight individual interviews with driving instructors in the same areas. A total of 23 young ATV/UTV users (14 boys and 9 girls) participated. They all live in small towns and rural areas in Norway with high use of ATV/UTV.

The interviews followed a semi-structured interview guide. We started the focus group interviews with rather broad questions to let the adolescents say in their words what they used the ATV/UTVs for and what they liked about it. After that, the questions would be more specifically directed to topics like traffic training, helmets, modified vehicles, speed, driving style with skidding and tricks, and so on. The social norm topics were addressed by asking questions about what having a vehicle meant to them, for instance when they don't have to ask their parents to drive them (independence), and how they used them to visit friends (social life). We also asked them about how they would meet up with their vehicles at certain places in their local area to hang out and drive together, and how their driving style at these occasions would differ from other circumstances.

Results

The adolescents in this study use ATV/UTVs for transportation and fun, and the vehicles are also important in their social lives, and social norms affect their risk-taking, concerning driving illegally modified vehicles, skidding, speeding, and driving without a helmet. They don't see this as risky driving, and it is normalized because "everybody does it".

They all drive ATVs/UTVs registered as tractors, which have a maximum permitted speed of 40 km/h. Nearly all the adolescents in our study have modified their vehicles to go faster, and they prefer to go 60 on public roads, and several of them drove faster than this. Both the youngsters and the parents agreed that «a little bit of speeding» was okay, and thought it was safer to drive faster because they could better follow the flow of traffic. The youngsters don't see their speeding as risky, as they claim to have control, and "everybody does it", and said that the police should leave them alone and focus on the ones who drove dangerously. The driving instructors also reported a traffic culture with many illegally modified vehicles, high speeds, driving on two wheels, and other types of risky driving.

Helmets are not mandatory for tractor-registered ATVs/UTVs. Helmet use seemed to be socially dependent; if their friends wear helmets, they are more likely to wear helmets themselves. Or if their parents order them to wear helmets, they comply, at least on longer trips, but not on shorter trips and in the summer because the helmets are bulky, warm, and cumbersome.

The teenagers say that they sometimes drive together as a group and when they do, their driving behavior is riskier. They wouldn't admit that it was dangerous, though. They would rather just say that they drove faster but didn't perceive this as a risk. They would also race each other on roads with less traffic. It was also common that they would meet other friends with their vehicles, not for the sake of driving together, but because vehicles and driving were integrated into the social fabric. They often drive with a passenger, which is identified as a risk factor and forbidden by law, and they do this for practical and social reasons.



Discussion and conclusions

The adolescents in this study use ATV/UTVs for transportation and fun. The vehicles are important in their social lives, and social norms affect their risk-taking, concerning driving illegally modified vehicles, skidding, speeding, and helmet use. They don't see this as risky driving, as it is normalized by "everybody does it". They do admit that their driving behavior changes when they are together with others, in line with previous research (Adams, Aitken, Mullins, Miller, & Graham, 2013; Khorsandi et al., 2021; Westaby & Lowe, 2005). This suggests that working with social norms can be a possible strategy to change driving style and the use of safety equipment among adolescents.

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