



# Mobility and safety of young drivers in Finland – using data analysis to promote safety

9.6.2022 Elina Uusitalo

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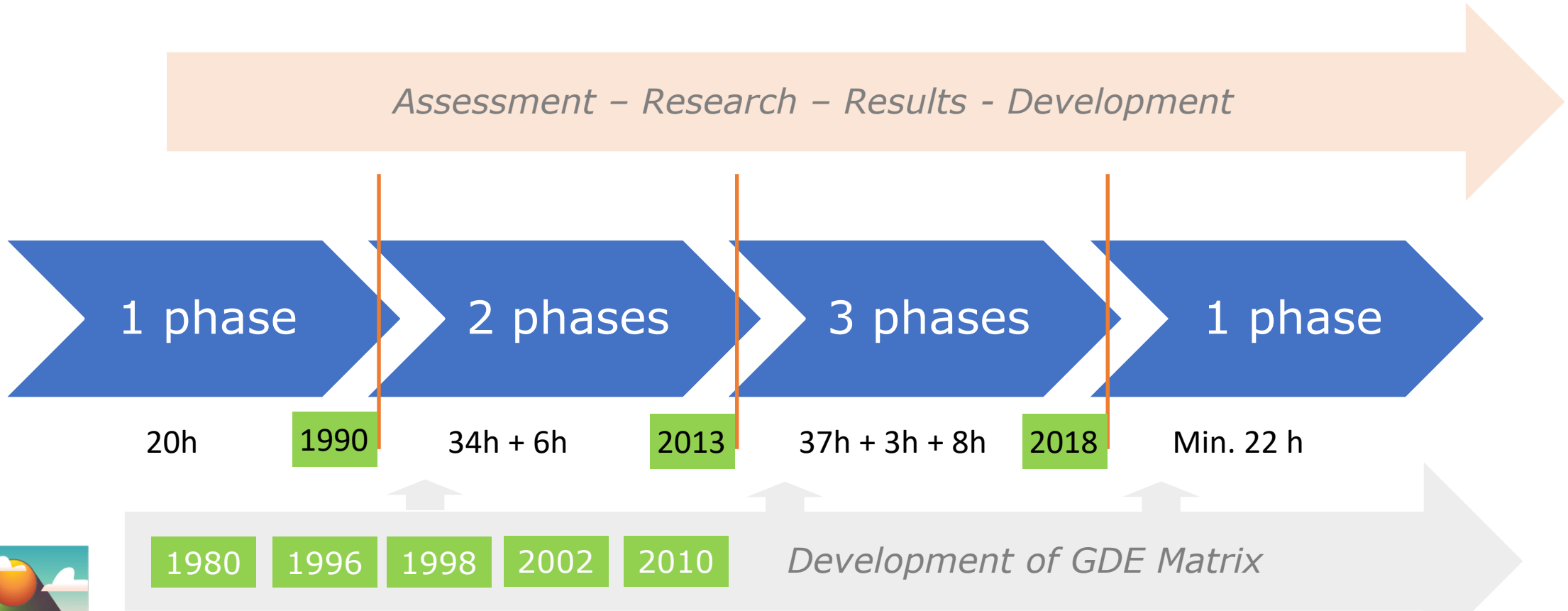
# Starting point

2018 driving license legislation

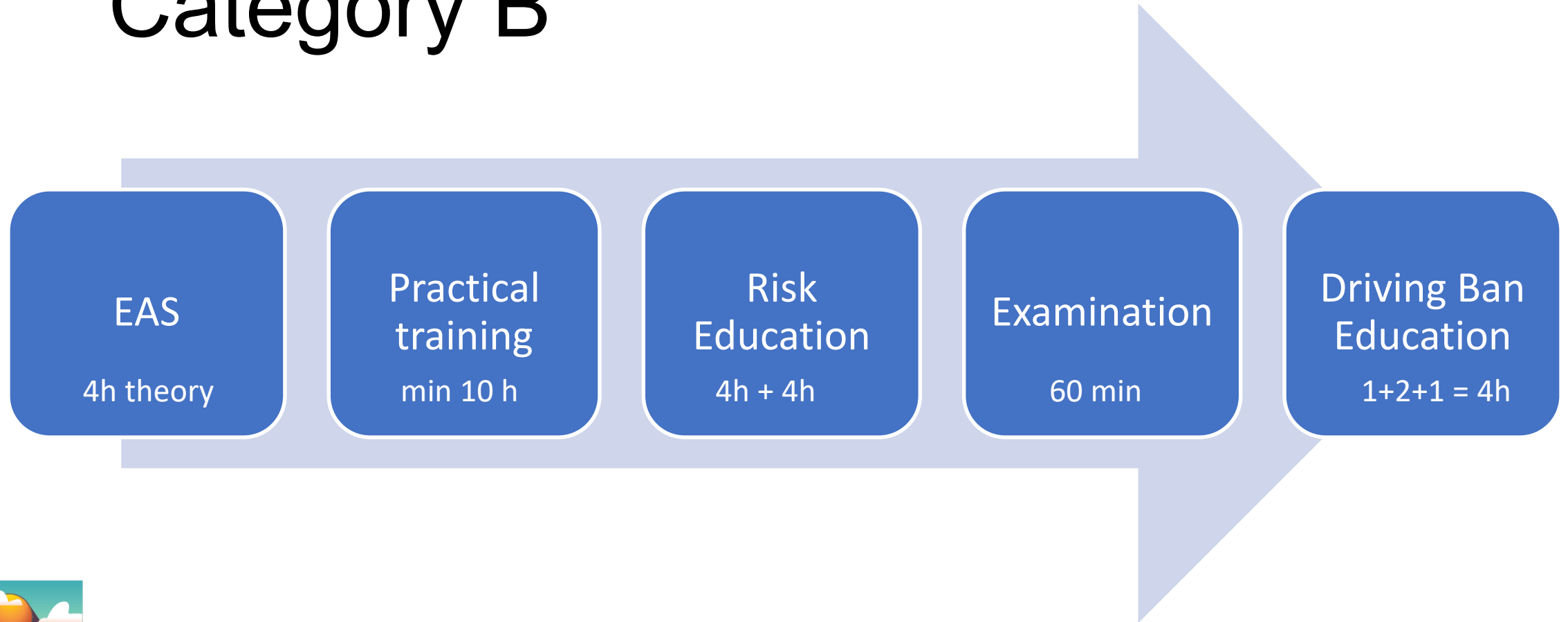


- A reform of the Finnish driving license legislation came into force in 2018 with major changes to driver instruction and examinations
- Compulsory training was cut in half
- Use of modern technology for learning
- Driving test time increased from 45 minutes to 60 minutes
- Full competence based assessment
- Focus was (even) more on higher-order skills and candidates behaviour
- Extension of the age exemption permit for the acquisition of a B driving license for 17-year-olds

# Driver education models - history



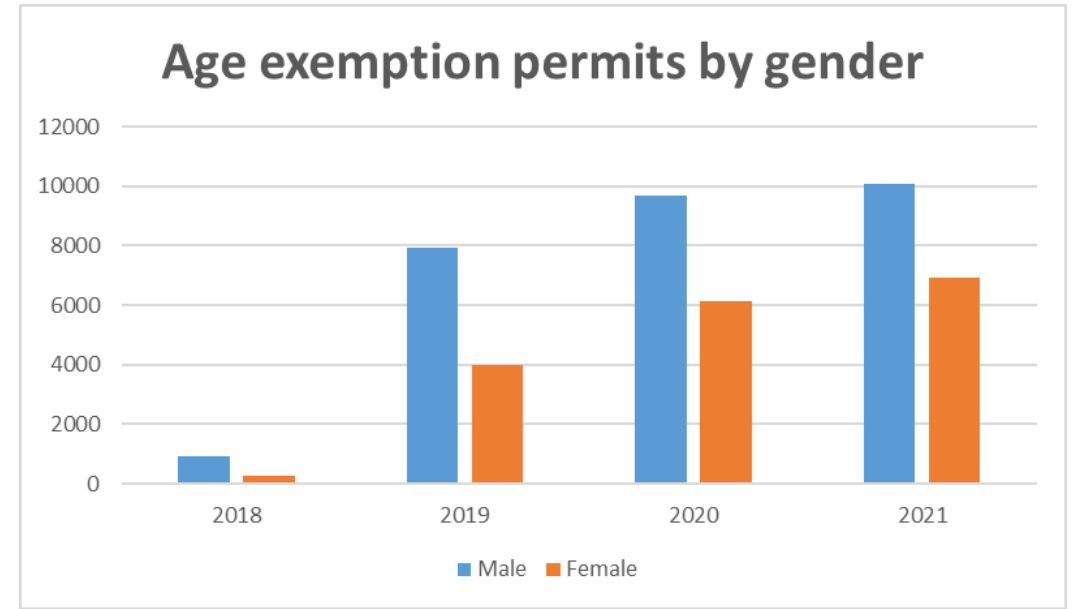
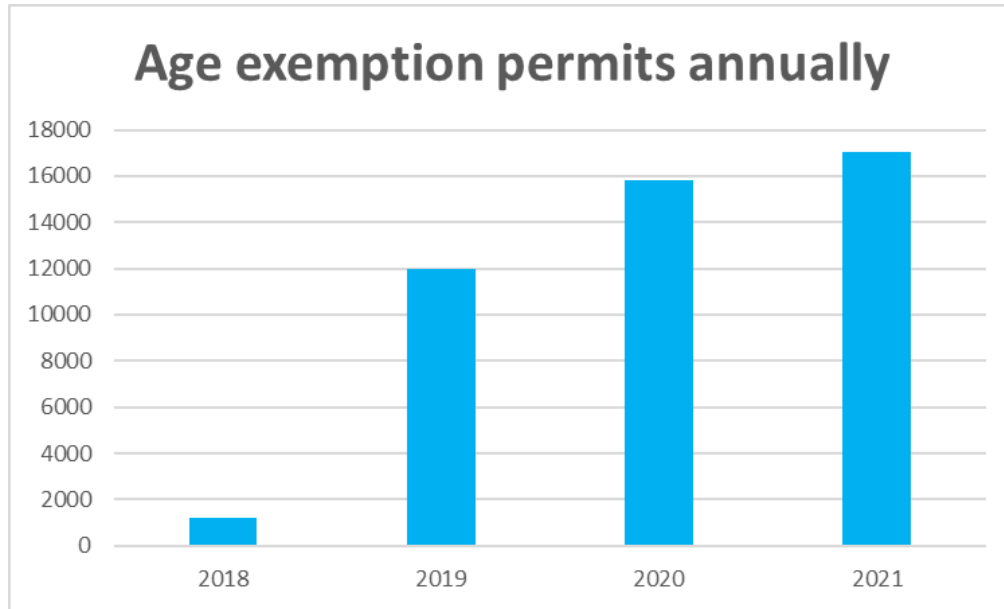
# Category B



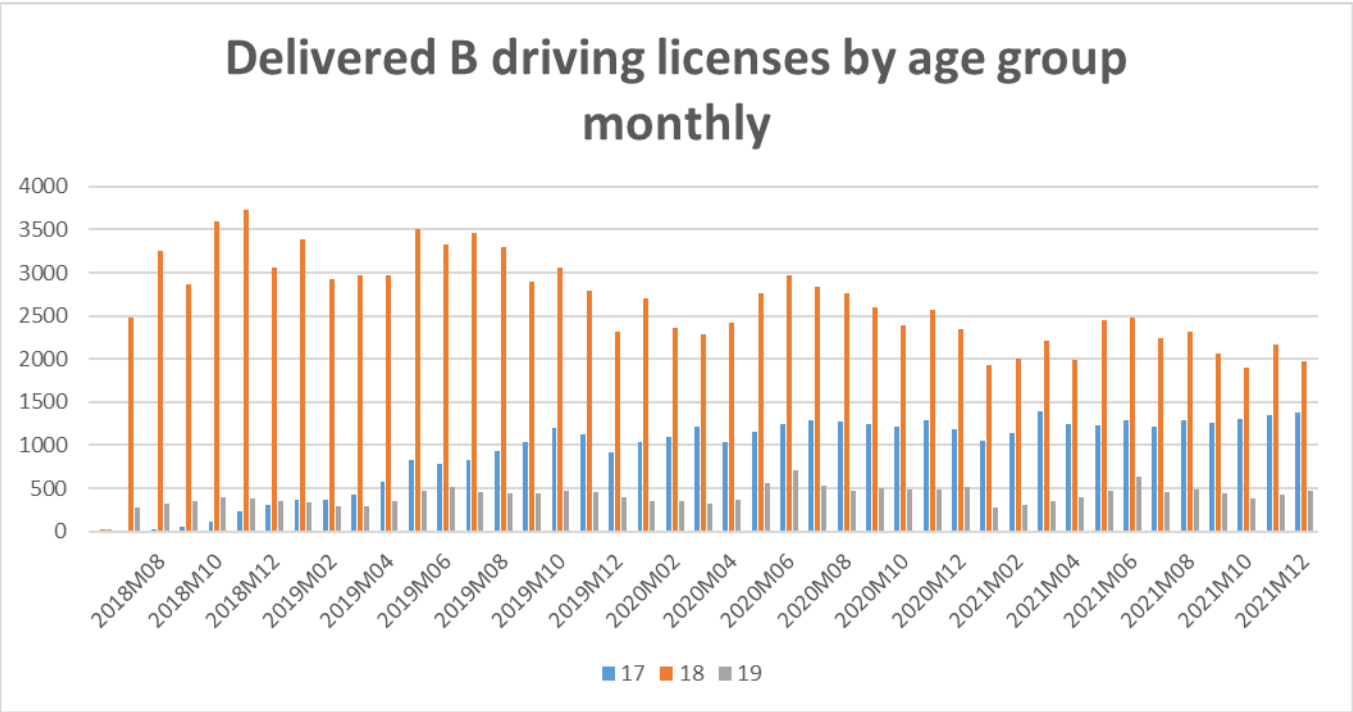
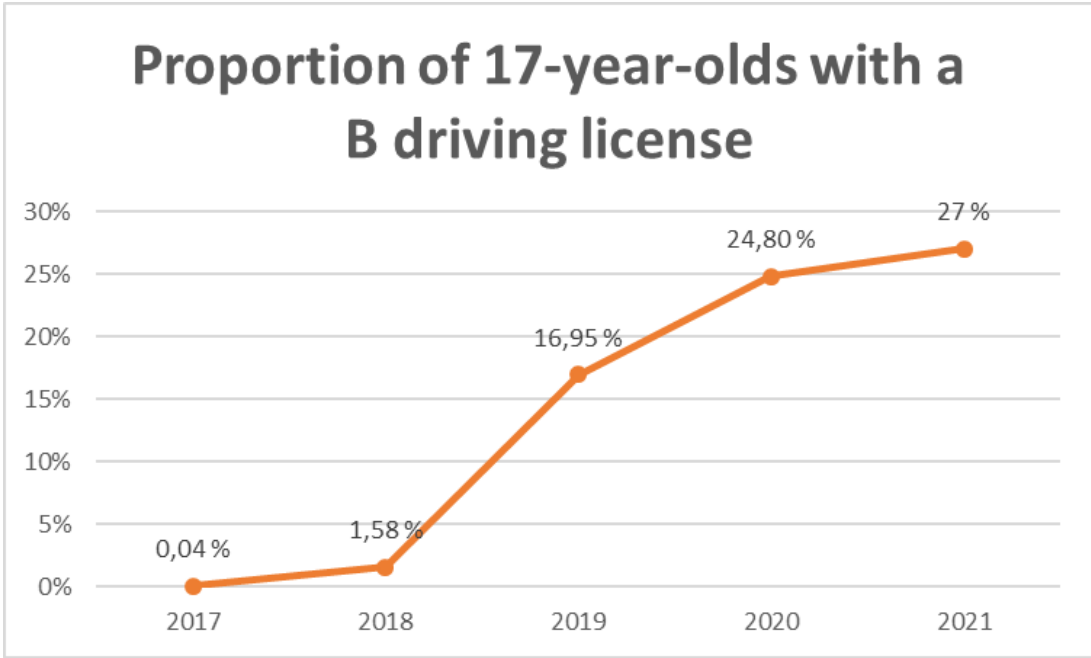
# Age exemption permit at age 17

- Driving instruction is allowed from age 16 in category B and normal licensing age is 18
- With an age exception permit, a driving license may already be obtained at the age of 17 if there are special reasons for this
- Special reasons for the issuing of the permit include long distances or the lack of public transport connections that regularly impede travel to and from
  - school,
  - work,
  - training taking place at the workplace or
  - regular, goal-oriented hobby activities.
- Additionally, an age exception permit can be issued based on health-related reasons that hinder or prevent regular travel.
- Same education and same examination as 18 year olds

# Age exemption permit

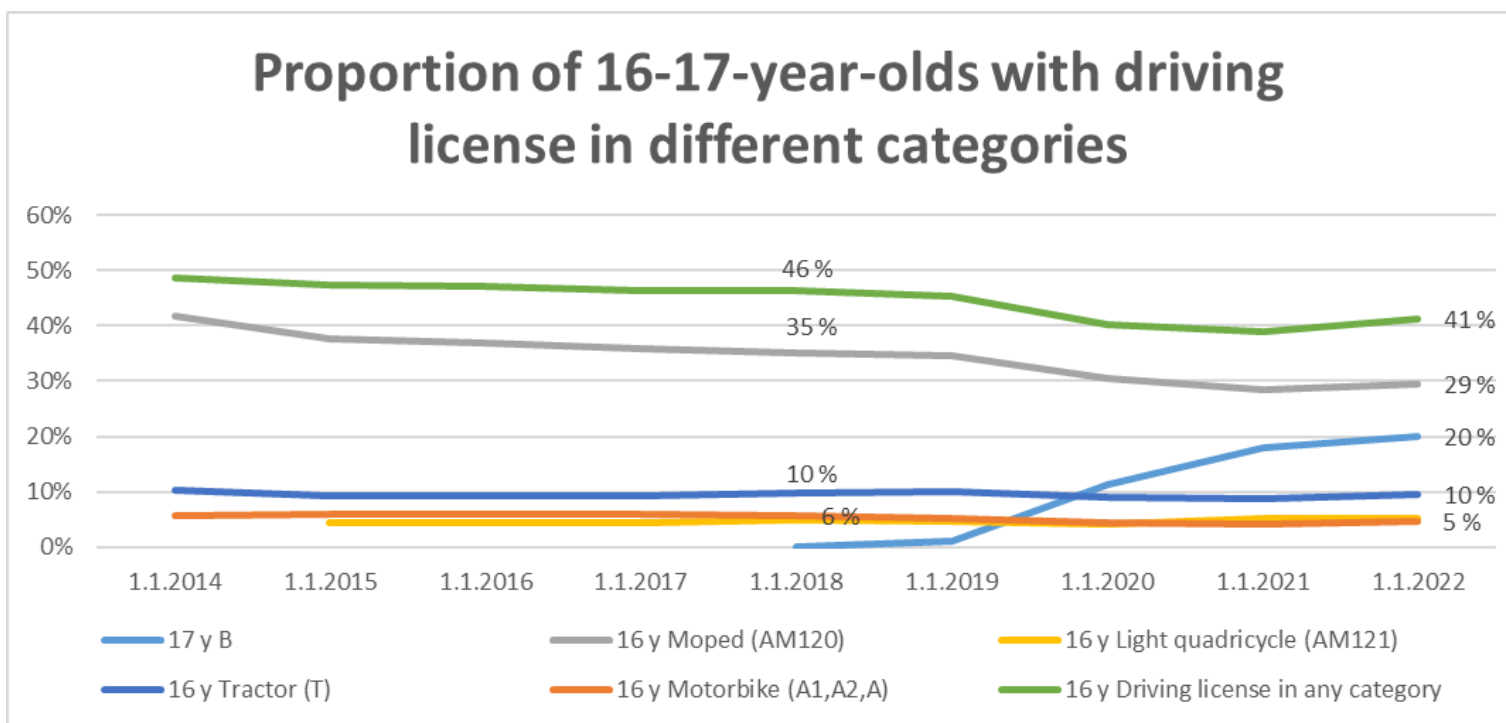


# Category B





# Driving license in any category



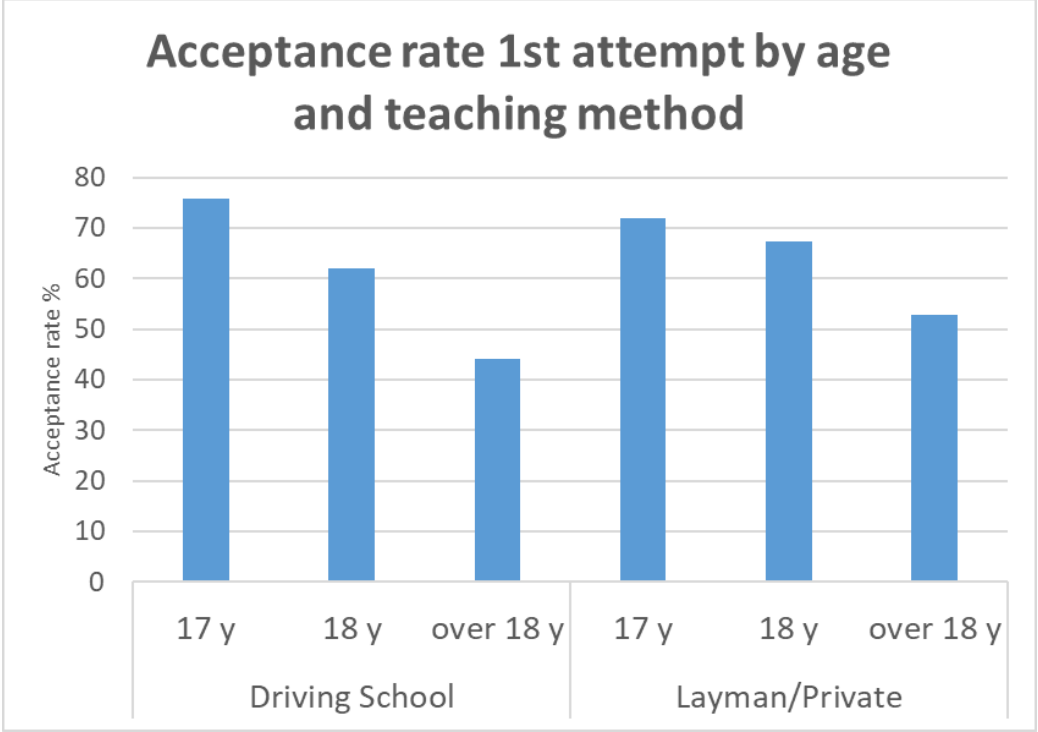
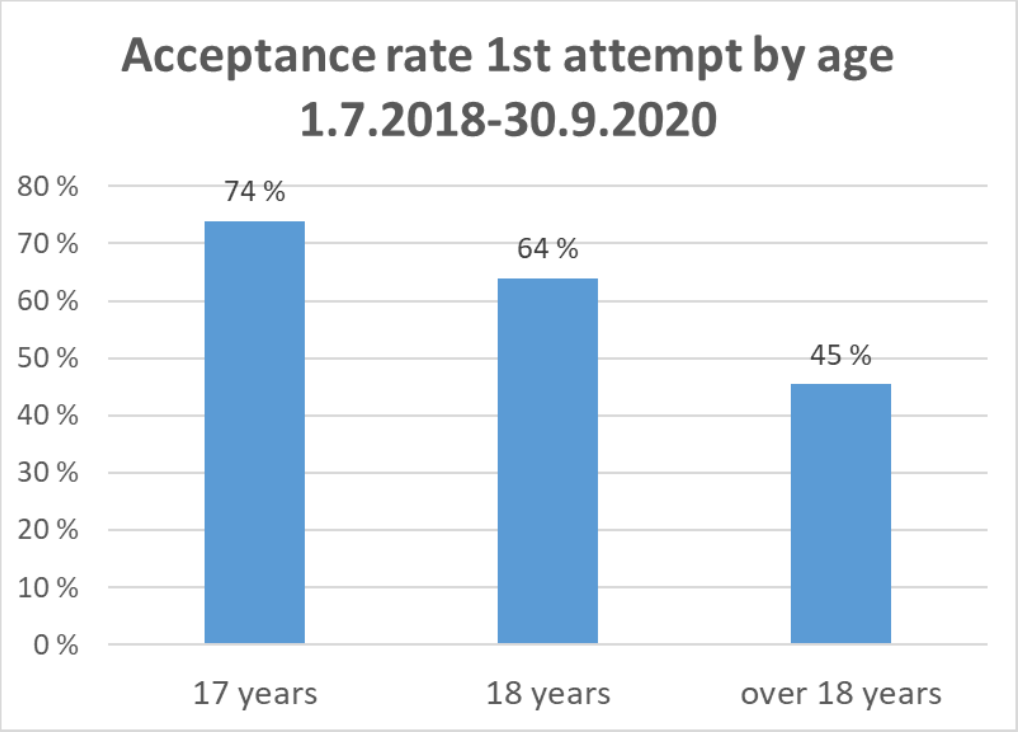
# Findings



# Driving test



# Success in driving test



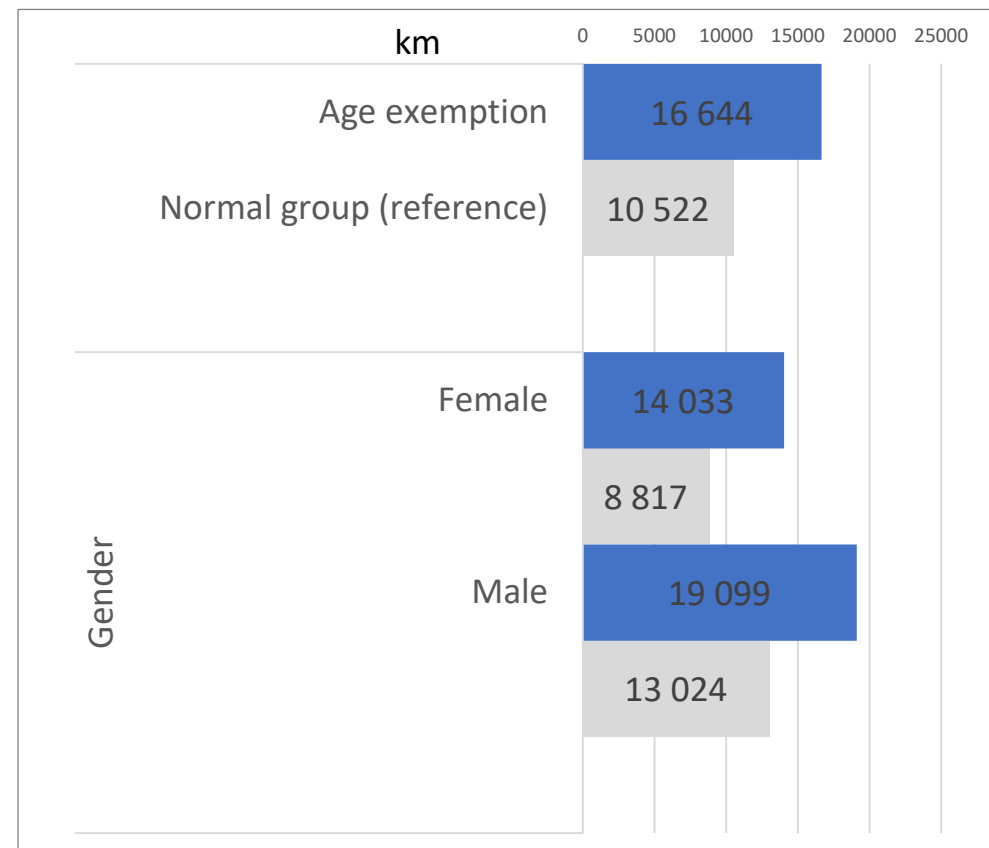
- First observation was that 17-year-olds have the highest acceptance rate in driving test
- The difference between the 17-year-olds and the 18-year-olds in the driving test pass rate was 10 percentage points
- The situation was the same whether the person had been taught in a driving school or with a teaching permit



# Mobility

# Accumulated mileage

- 87% of those who received a driving license with an age exemption stated that they travel by car every day or almost every day. The share of those who travel less than once a week was 2%.
- 67% of respondents reported carrying a passenger to school or work at least once a week. In terms of leisure travel it was almost 80 percent.
- During the first year of driving, those who had obtained an driving license with an age exemption had driven significantly more than all those who had obtained a driving license on average. There was a difference of almost 60% in the average driving performance in the first year
- Of the different groups of drivers, male respondents and respondents living in small towns had the highest mileage



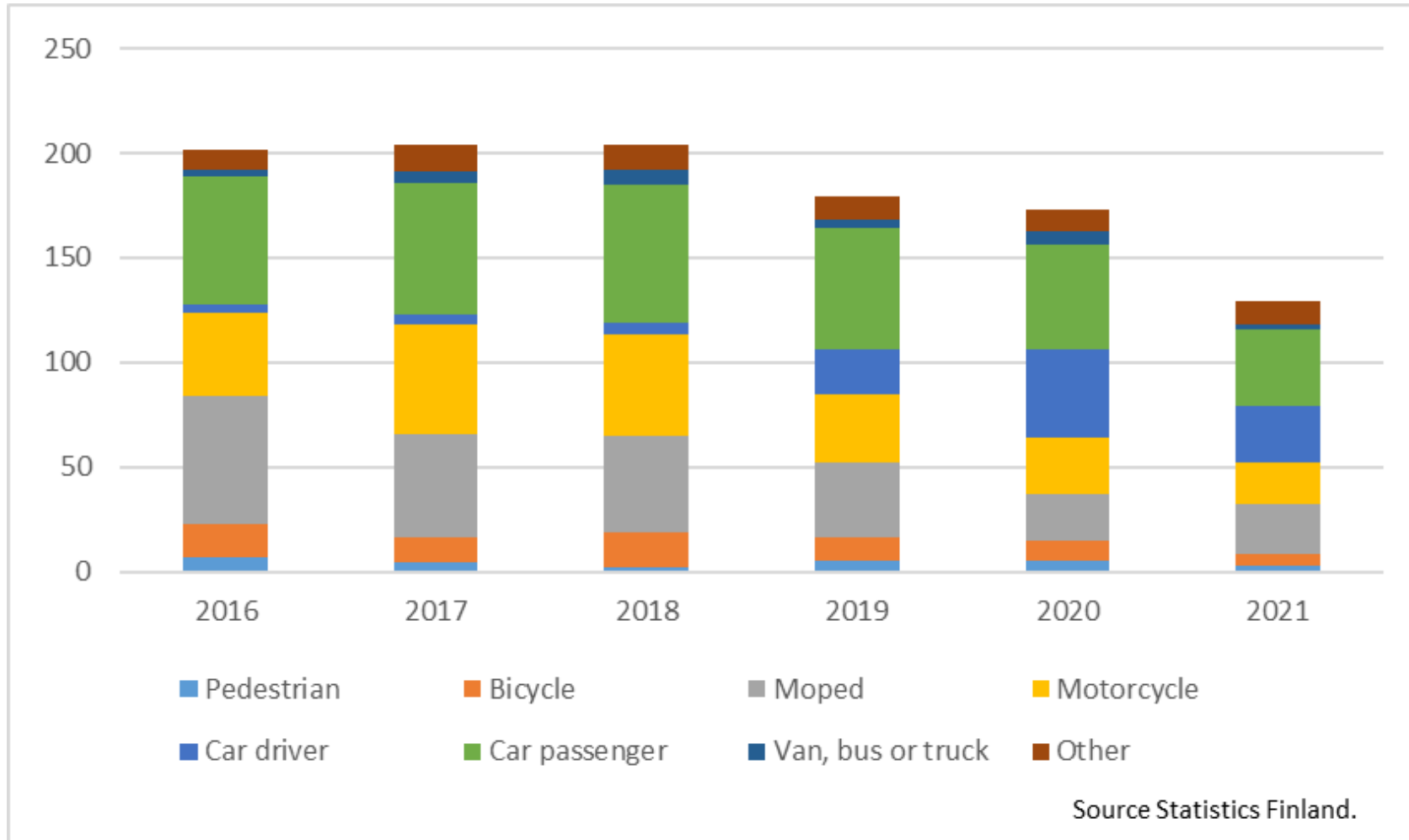
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# Behavior Accidents

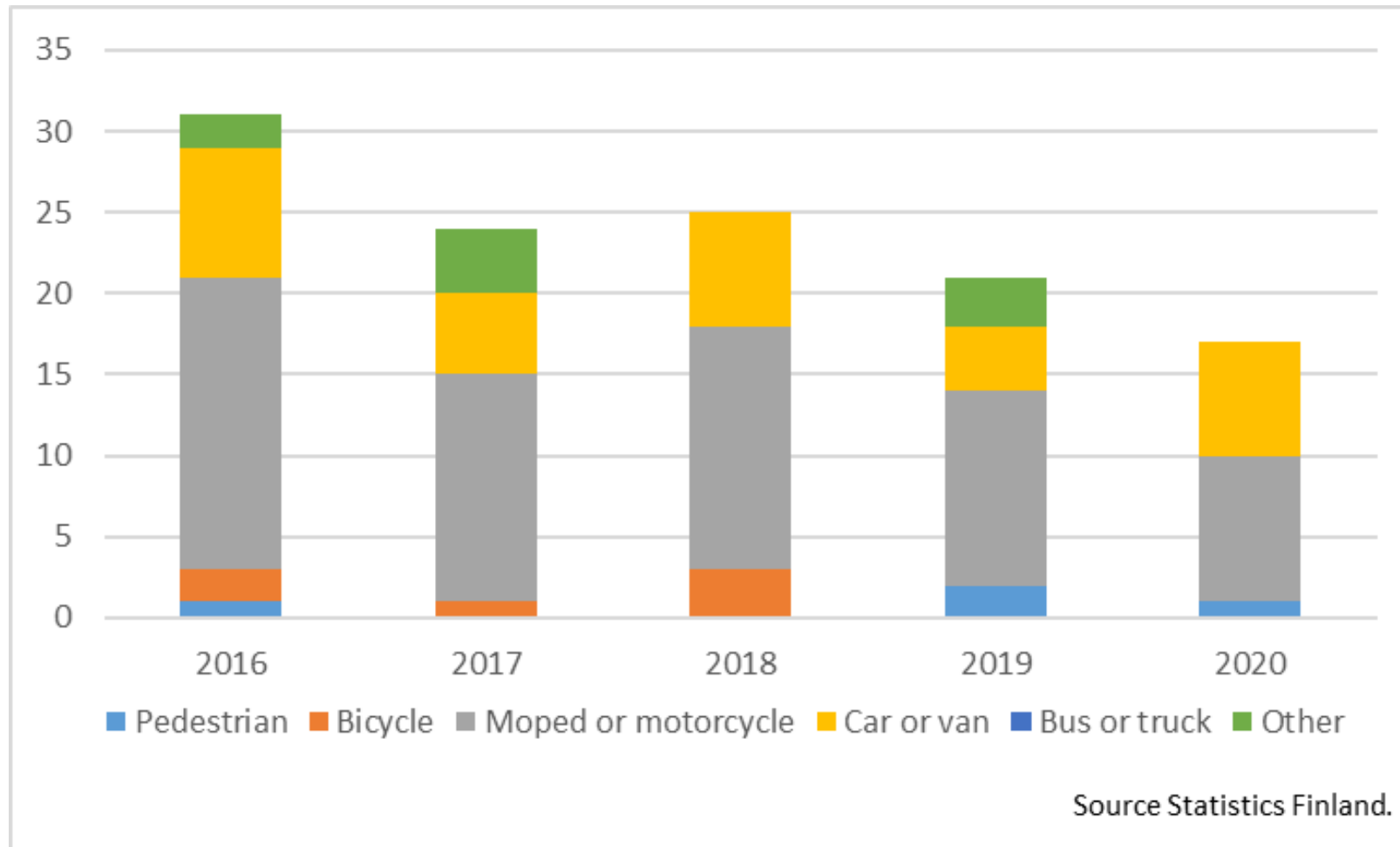


# 17 years old injured by mode of transport, police reported injuries





# 17 years old seriously injured by mode of transport, hospital data

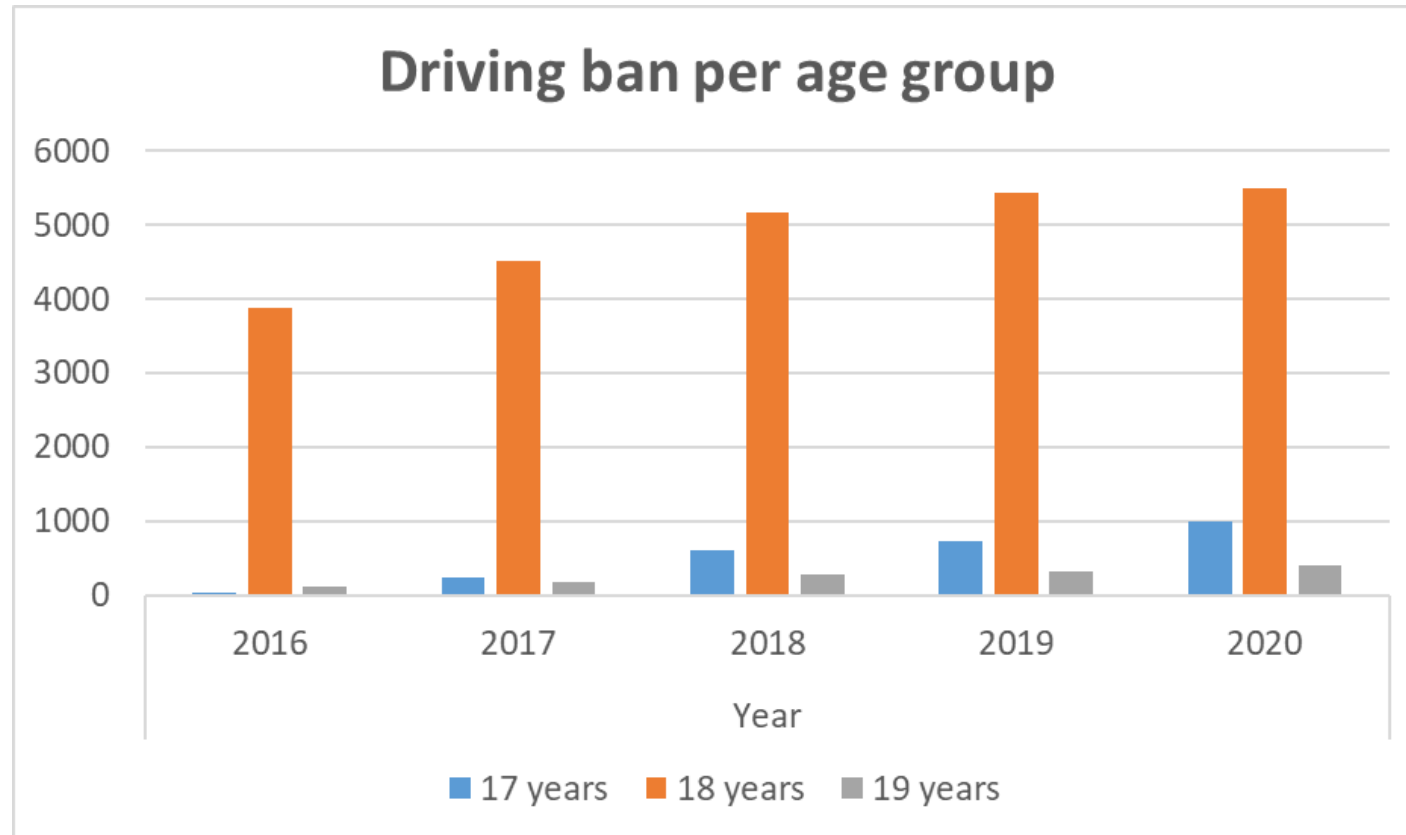


# Behavior

## Driving bans

A temporary driving ban imposed by the police at traffic control

# Development of driving bans for young drivers (B)



# Behavior Age



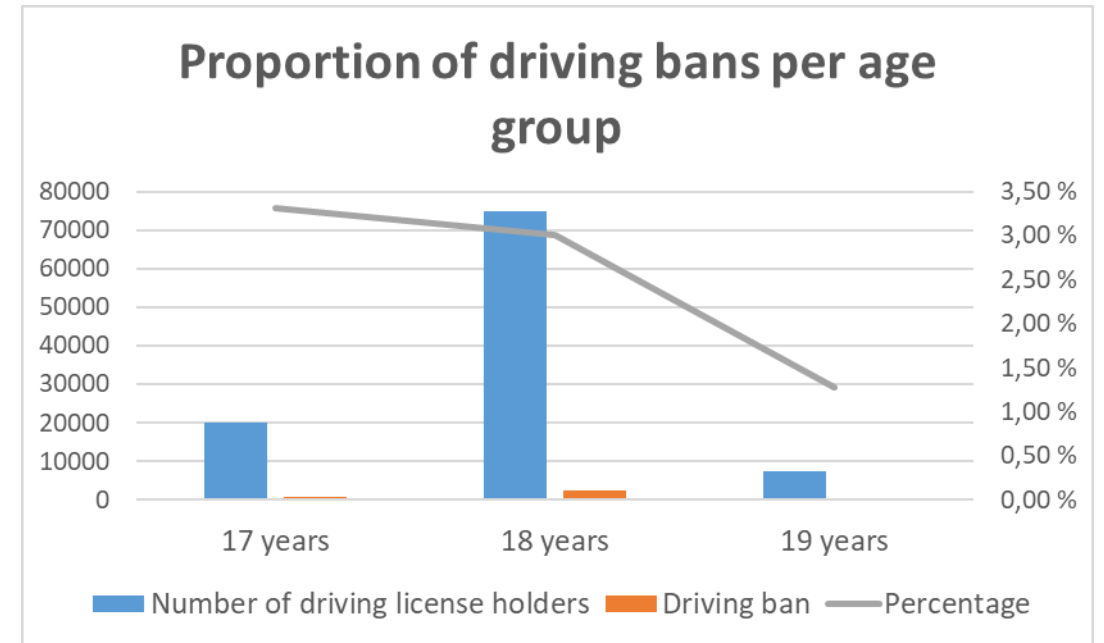
# Before and after licensing

Age	Driving ban after B license	Driving ban before and after B license	Percentage
17 years	662	101	15 %
18 years	2264	284	13 %
19 years	95	10	11 %

- If the person had a driving ban before category B license, the probability that he or she will repeat the offense after obtaining a B driving license is higher if he or she is 17 years old

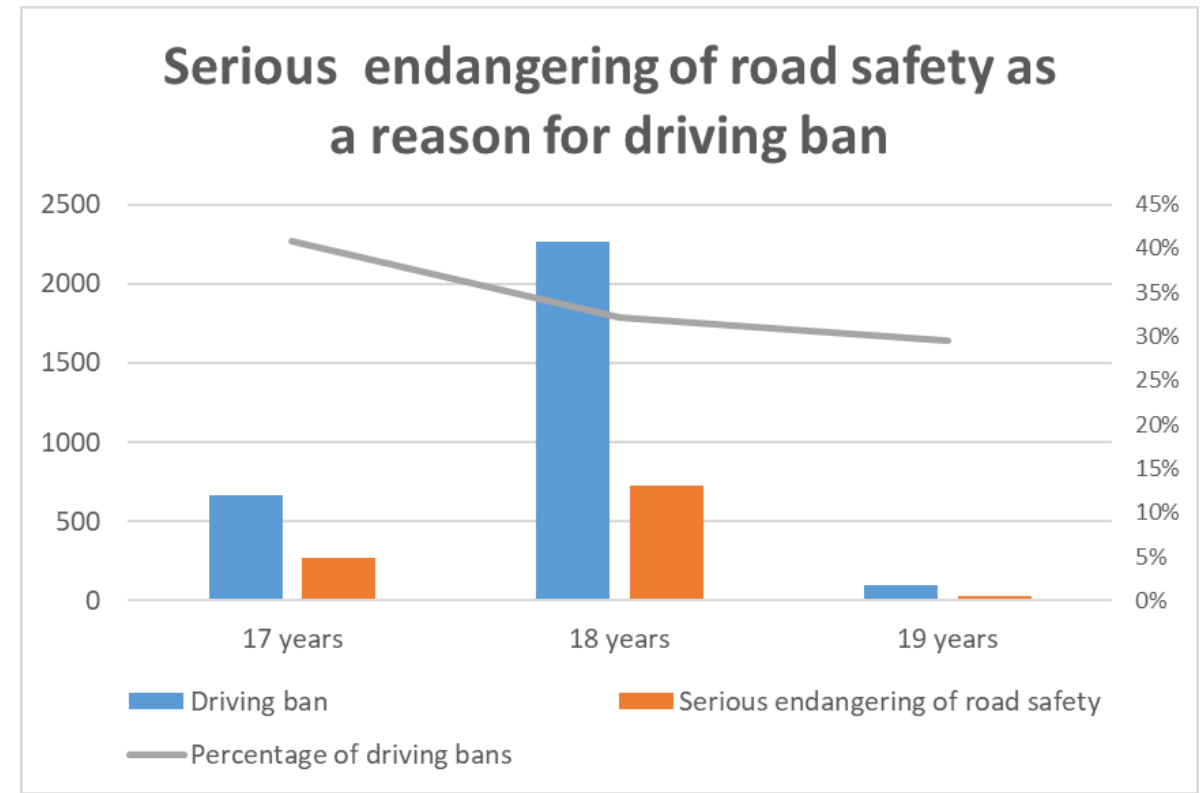
# Driving bans per age group after licensing

Age	Driving license holders	Driving ban	Percentage
17 years	19 988	662	3,31 %
18 years	74 978	2 264	3,01 %
19 years	7 419	95	1,28 %



# Reason for driving ban - Serious endangering of road safety

Age	Driving ban	Serious endangering of road safety	Percentage of driving bans
17 years	662	270	40,78 %
18 years	2264	727	32,11 %
19 years	95	28	29,47 %



# Behavior

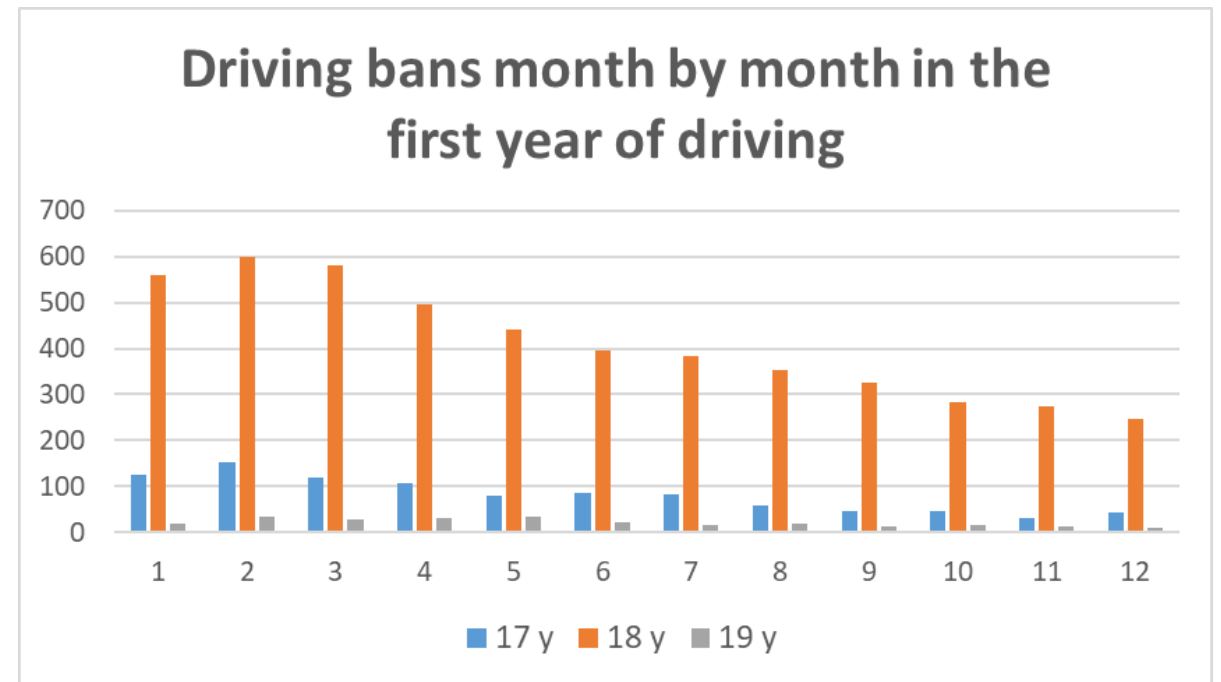
## Driving experience

First year as a driver



# Driving bans during the first year

- The risk behavior of new drivers had the same characteristics regardless of age group.
- Approximately 50% of driving offenses in the first year of driving occurred within the first 4 months of obtaining a driving license in all age groups.



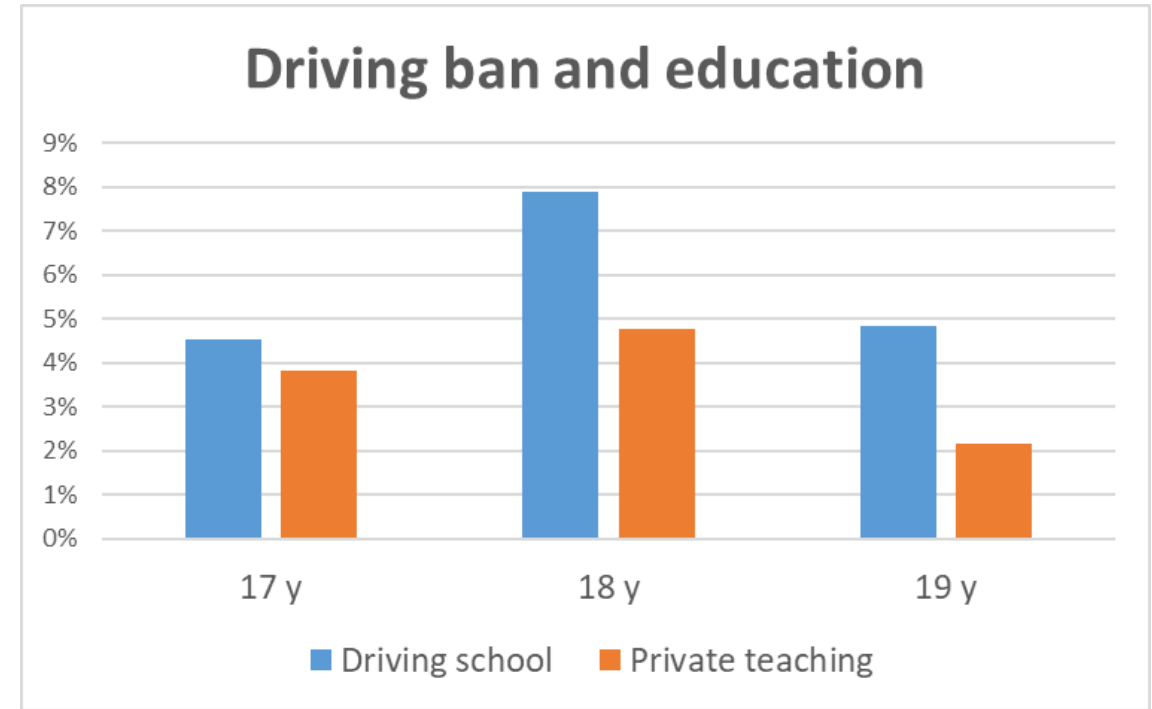
# Behavior Education

Professional vs. non-professional  
One stage vs. three stage system



*Driving ban and Education*

	<i>Driving school</i>	<i>Total</i>	<i>Percentage</i>	<i>Private</i>	<i>Total</i>	<i>Percentage</i>
17 v	466	10 232	4,55 %	375	9 815	3,82 %
18 v	3 733	47 336	7,88 %	1 235	25 927	4,76 %
19 v	262	5 395	4,85 %	40	1 843	2,17 %
<i>Total</i>	4 461	62 963	7,08 %	1 650	37 585	4,39 %



- Novice drivers trained in driving schools were relatively more likely to commit driving offenses than those who were in private education – in all age groups
- The phenomenon was similar during the three-stage education system, i.e. before the reform

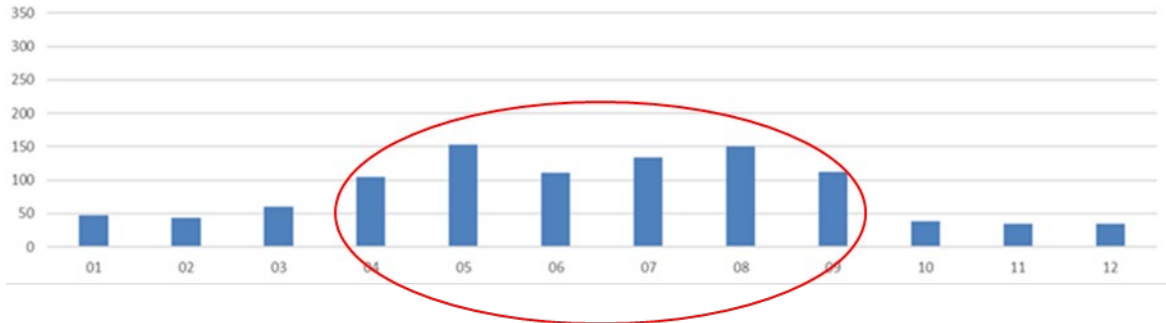
# Behavior

Season, day of the week, time of the day



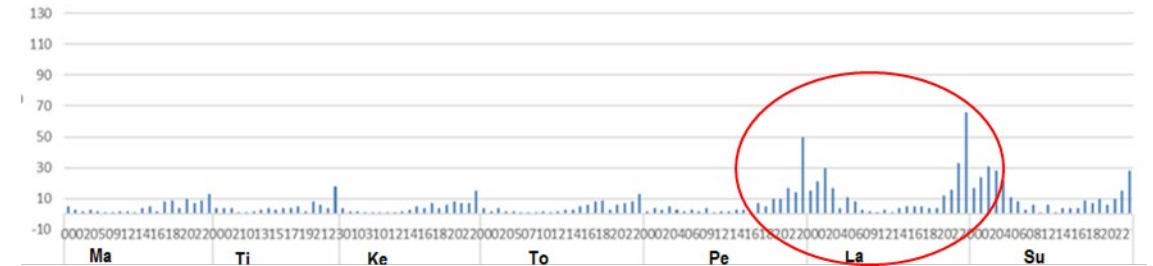
## Months

17-vuotiaat



## Weekdays

17-vuotiaat



- The effect of the Finnish seasons on driving behavior was clearly distinguished from driving offenses
- Most driving bans are imposed in spring, summer and early autumn, i.e. at a bright time of the year
- Day of the week and time of the day → for weekends and night time.
- Behavior was similar in all age groups 17, 18 and 19 years of age

# Comparison – first 6 months

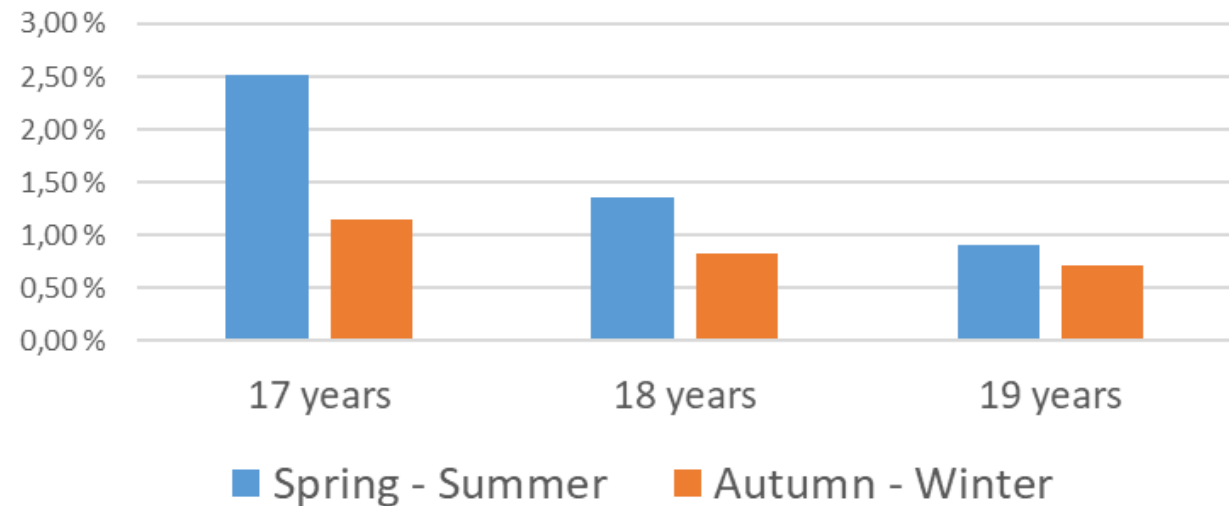
September 2019 - February 2020

Age	Driving license holders	Driving bans	Percentage
17 years	6 657	76	1,14 %
18 years	15 550	128	0,82 %
19 years	1 935	14	0,72 %

May 2020 - August 2020

Age	Driving license holders	Driving bans	Percentage
17 years	7 298	184	2,52 %
18 years	15 070	205	1,36 %
19 years	1 871	17	0,90 %

## The effect of season on driving behavior



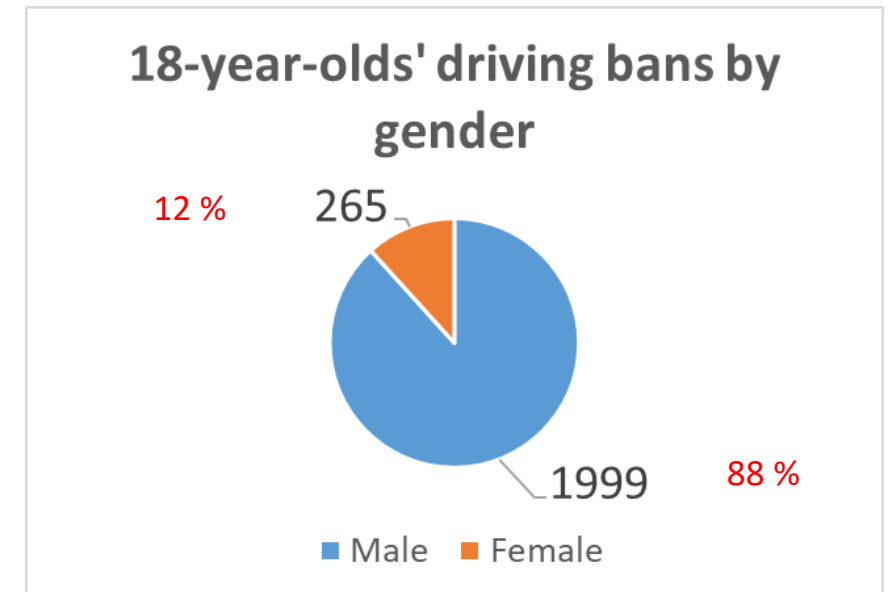
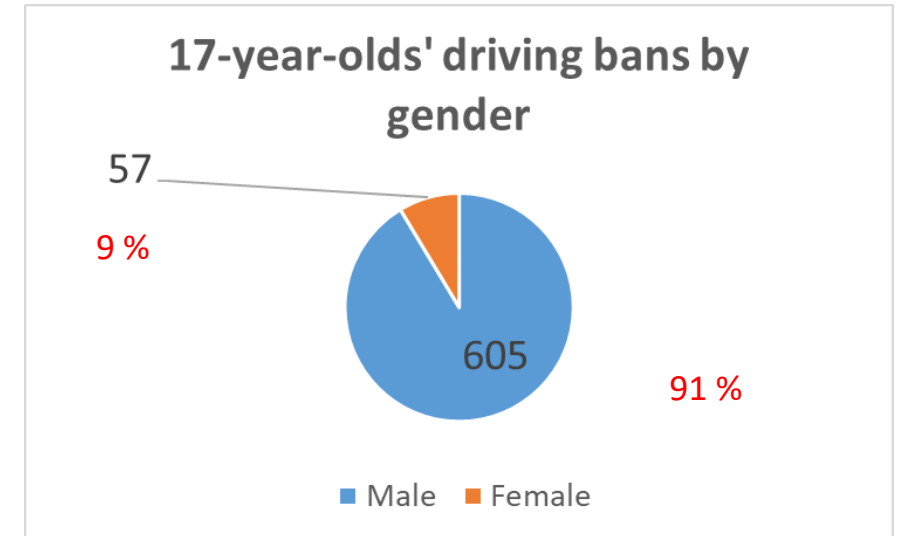
# Behavior Gender



# Risk behavior

- A significant issue in all age groups is the risk behavior of men.
- The proportion of men among driving offenses was almost 90 % in all age groups.
- For 17-year-olds, the importance of gender is particularly pronounced, as there were twice as many men as women in the age group of 17-year-old drivers in the study population.

Age	Male	Female	Total
17	13 687	6 570	20 257
18	38 969	35 141	74 110
19	3 347	3 970	7 317
Total	56 003	45 681	101 684





# Behavior

## Driving ban education



# Driving ban education

- It seems that the compulsory driving ban education has a positive impact on behavior of novice driver
- 92 % of drivers banned from driving are no longer repeat offenders
- The corresponding percentage before the reform was 87 %
- Driving ban education seems to be most effective for 17-year-old drivers → 94 % of them did not repeat the offender anymore

## Driving Ban Education

A driving ban may be imposed on the person if he or she has committed one or more driving offences during this two-year period

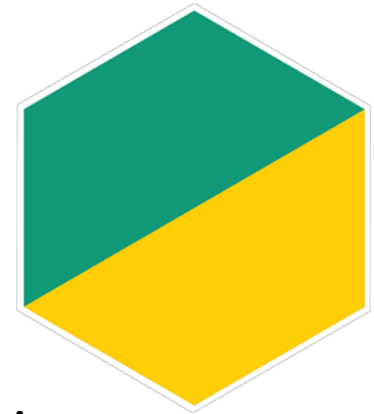
- **Analysis of your own behaviour as a driver (1 h)**
  - Analysis of your own skills and actions as a driver, a description of circumstances and factors leading to violation/offence, description of determination of guilt and consequences and feelings after the offence
  - Either in writing or a private discussion with a counselor/teacher
- **Group discussion (2 h)**
  - Concentrates on relevant themes based on those topics found in own analysis; impacts and feelings of oneself and family, the effect of punishment, the meaning of traffic safety and how you can contribute to that
- **Finding solutions (1 h)**
  - Individual plan how to prevent offence in the future
  - Either in writing or a private discussion with a counselor/teacher

# New legislation



# New legislation

- No age exemption permit anymore – a 17 year old can apply a Class B driving license with the consent of a guardian
- Limitations:
  - Night time driving ban between 00 - 5 am every night
  - Only one passenger per car
  - 17 year olds identification plate in the window
- 2 more hours for risk education for everyone
- Driving ban education extended for other categories in group 1:
  - Tractor (T)
  - Moped (AM120)
  - Light quadricycle (AM121)





# Thank you for your attention!

More information

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<https://www.traficom.fi/sites/default/files/media/file/Kuljettajaopetuksen%20ja%20tutkinnon%20uudistus%20vuonna%202018%20Katsaus%20lakimuutoksen%20vaikutuksiin.pdf>

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