

Evaluation of the 2nd phase of the driver training in Austria

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Evaluation study sponsored by



Overview

Background

Content of the training (modules)

Evaluation

Design

Results

Conclusions & Outlook

Background

2nd phase education is implemented since

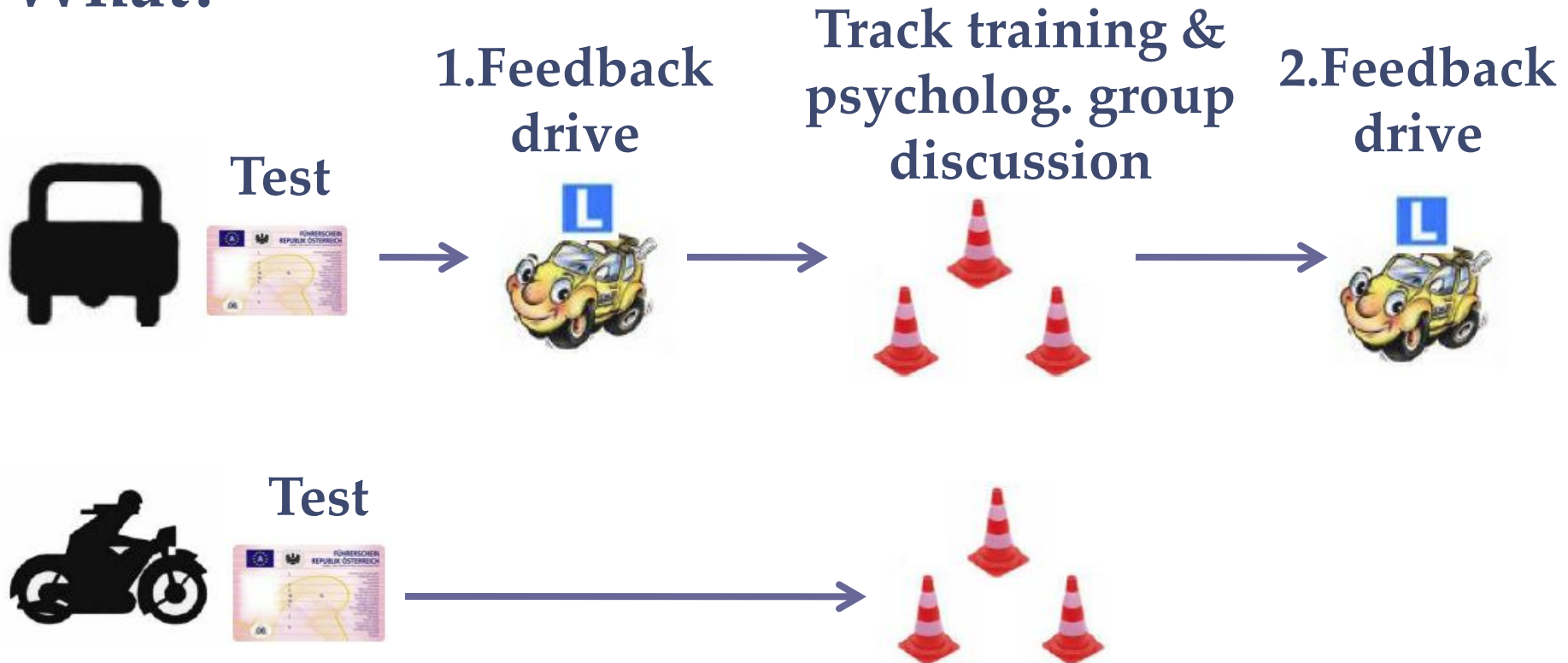
1.1.2003

Who?

All novice drivers holding a driving license for category A or B

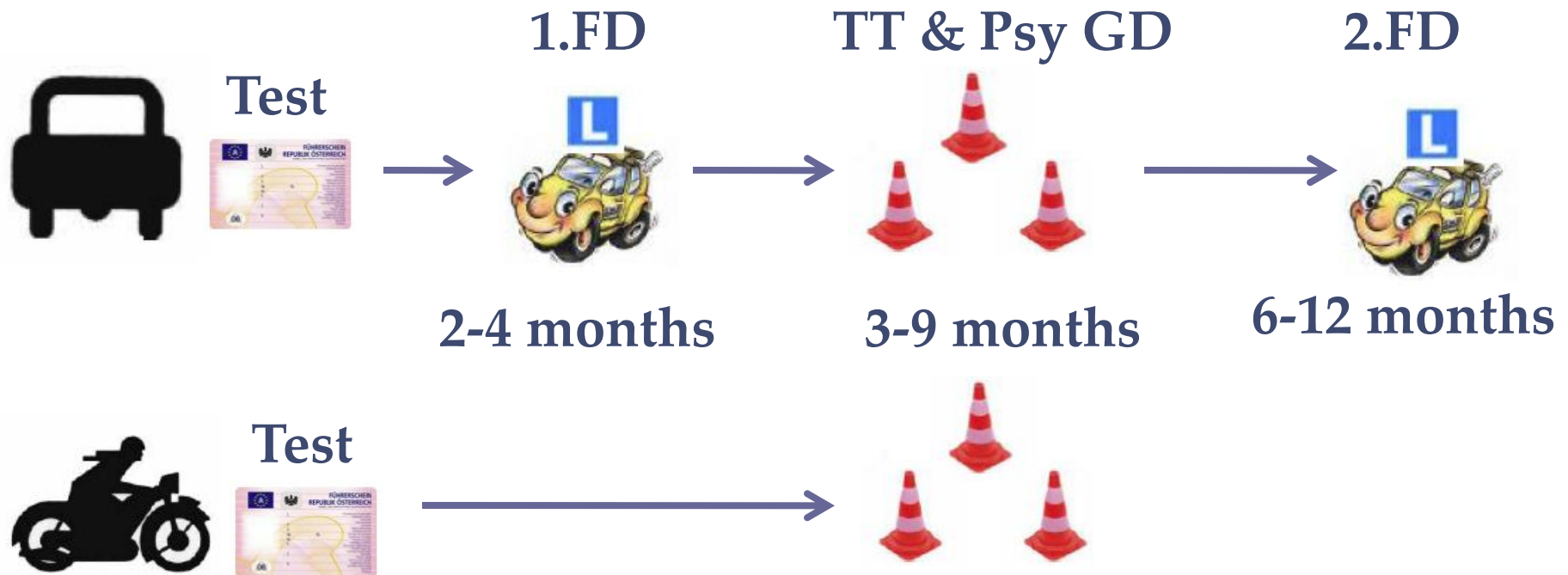
Background

What?



Background

When?



Background

Consequences of delay?



4 months



4 months



Until completion
of all modules

Content

Module: 1st feedback drive

Duration: 2 hours



...hazard perception....

...accident avoiding defensive driving...

...social behaviour...

...analysing negative influence from others...

...analysis of individual strengths and weaknesses...

...wrongly adapted behaviours...

Content

Module: track training

Duration: 6 hours



...demonstration of driving dynamics and accident risks...

...experience of vehicle & personal boundaries...

...braking distances...

...awareness that mastering difficult situations is not a calculable risk...

...avoidance of self-overconfidence...

Content

Module: psychological group discussion

Duration: 2 hours, combined with track training



...typical accident risks...

...individual accident risks...

...single vehicle accidents ...

...self over-confidence...

What is my typical accident?

What are my weaknesses/strengths?

Content

Module: 2nd feedback drive

Duration: 2 hours



Same topics as 1st feedback drive, eg.
...analysis of individual strengths and weaknesses...
...especially compared to the 1st feedback drive...

Evaluation study

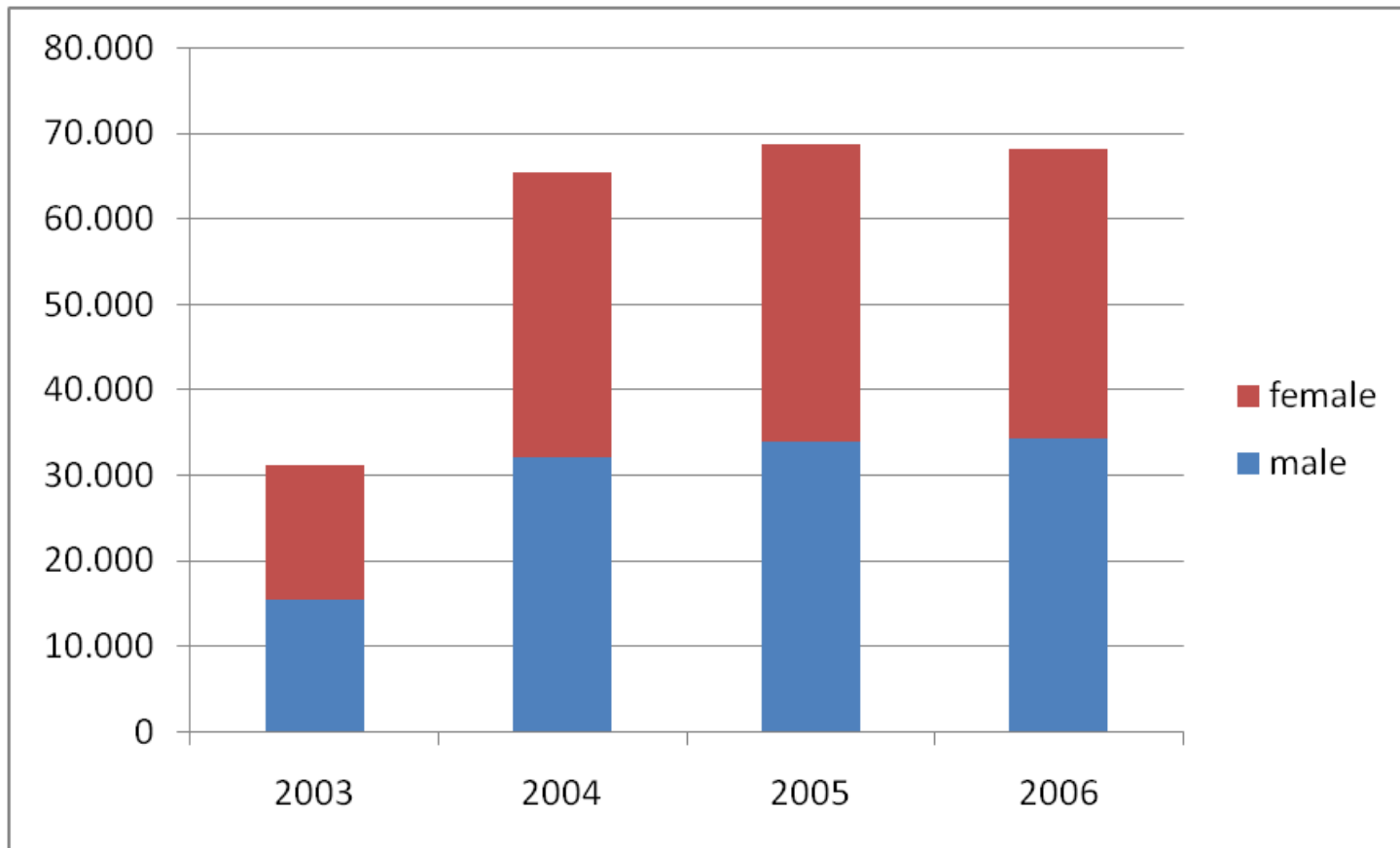
Evaluation design

Evaluation type	Method	Topic
Accident analysis	Before-after comparison, statistical modelling	All accidents, single vehicle accidents
Process evaluation	questionnaire for 2nd phase participants	<u>Before:</u> Personal demographic data, expectations, self assessment of driving competence, attitudes <u>After:</u> Same as before but additional assessment of skills, satisfaction and feedback
Nationwide Survey	Control group of BASIC-study vs. Intervention group (2 nd phase)	Demographic data, beliefs and attitudes, exposure, pass-rates, self reported accidents & offences, satisfaction with modules
Overall View	Licensing Register Data	Distribution of 2 nd phase license holders in terms of age, sex and time between issuance of driving license and completion of single modules

Licensing Register Data

Evaluation results – Overall view

Distribution of novice drivers (cat. B) in Austria since 2003:

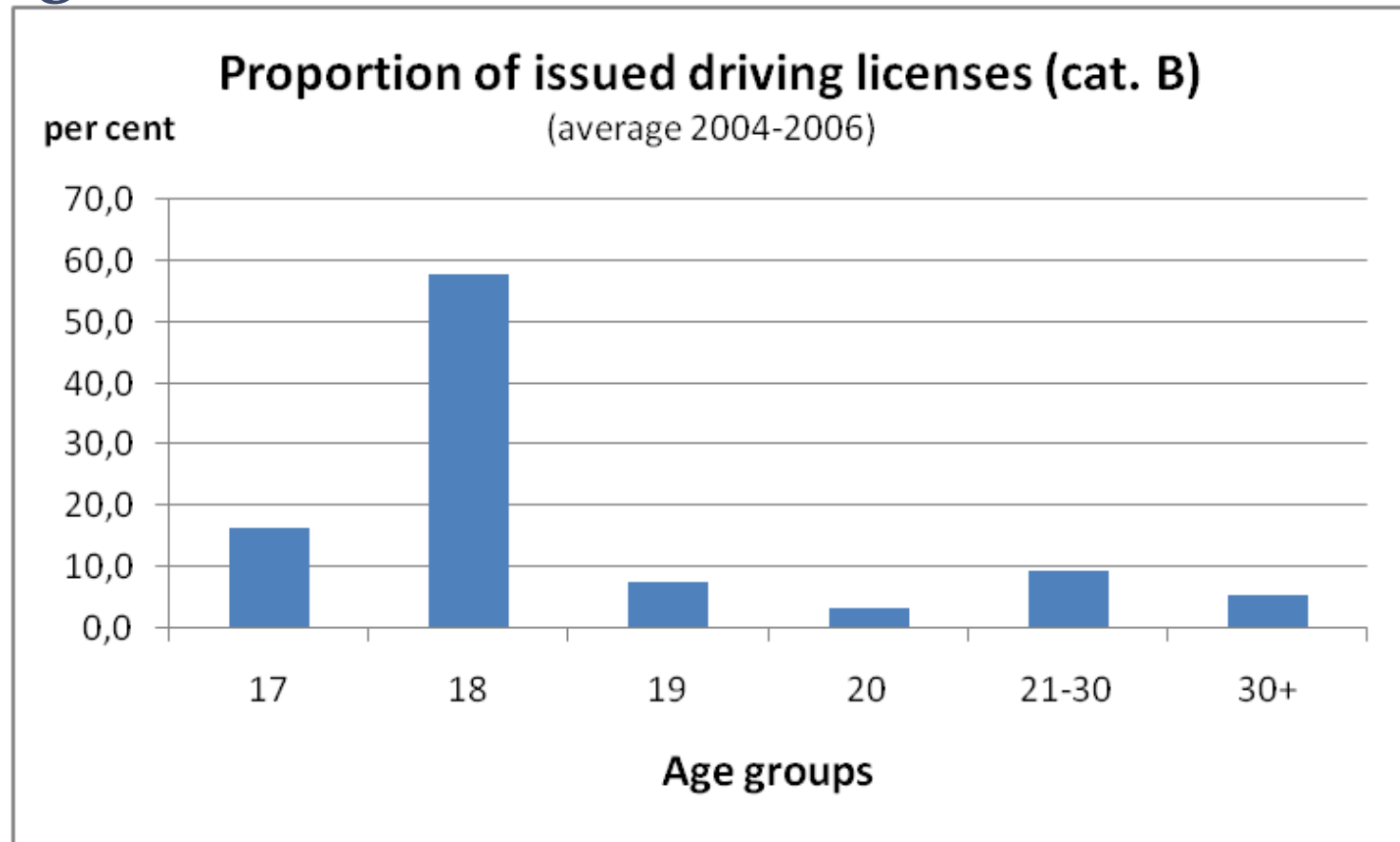


Accident analysis

- Time series analysis
- Accidents and driving experience
- Single vehicle accidents (by gender)

Evaluation results

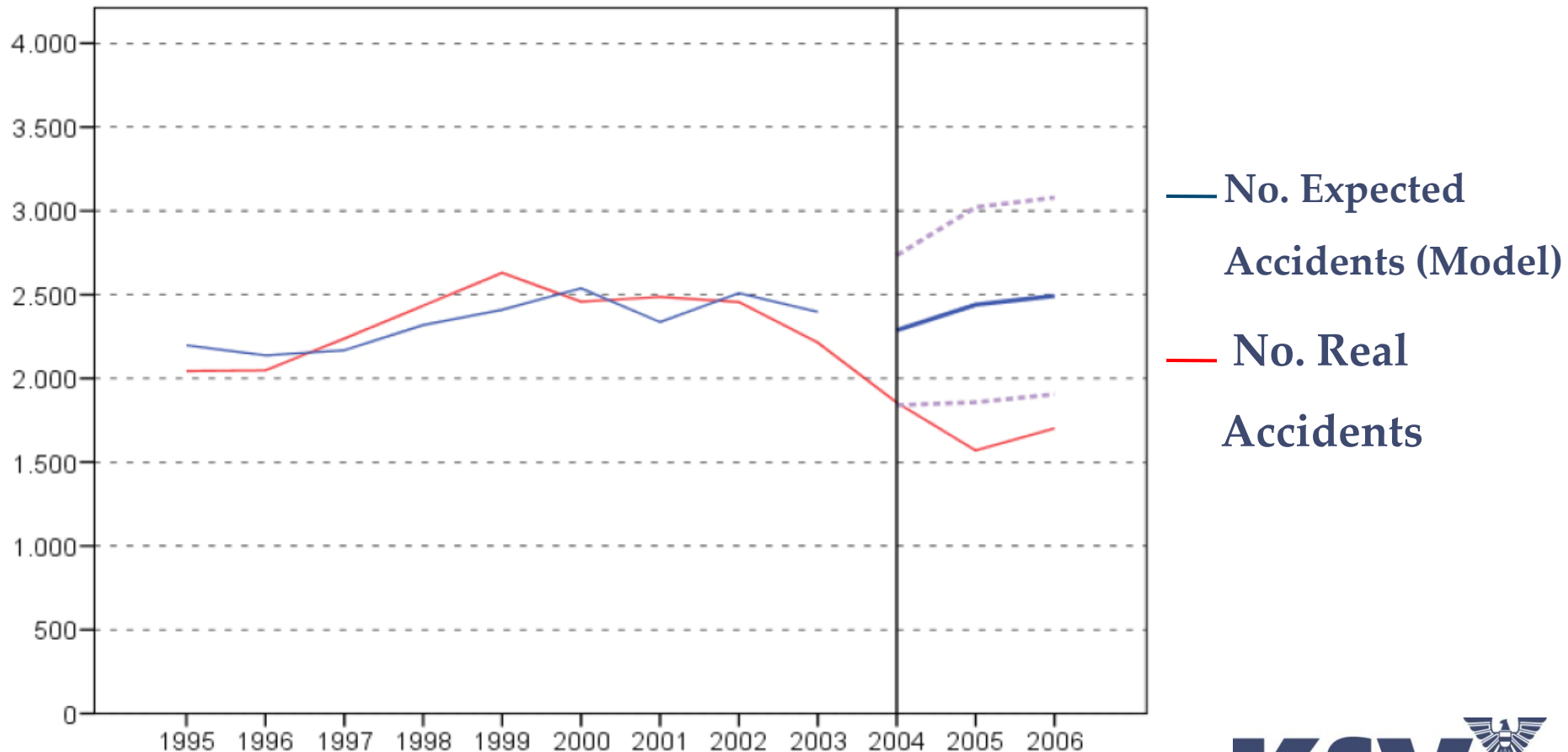
Background info:



Evaluation results – Accidents

Time Series Analysis

18 year old drivers involved in accidents with personal injury



Model:ARIMA (1,0,1) Model Fit: $R^2=,520$

Evaluation results – Accidents

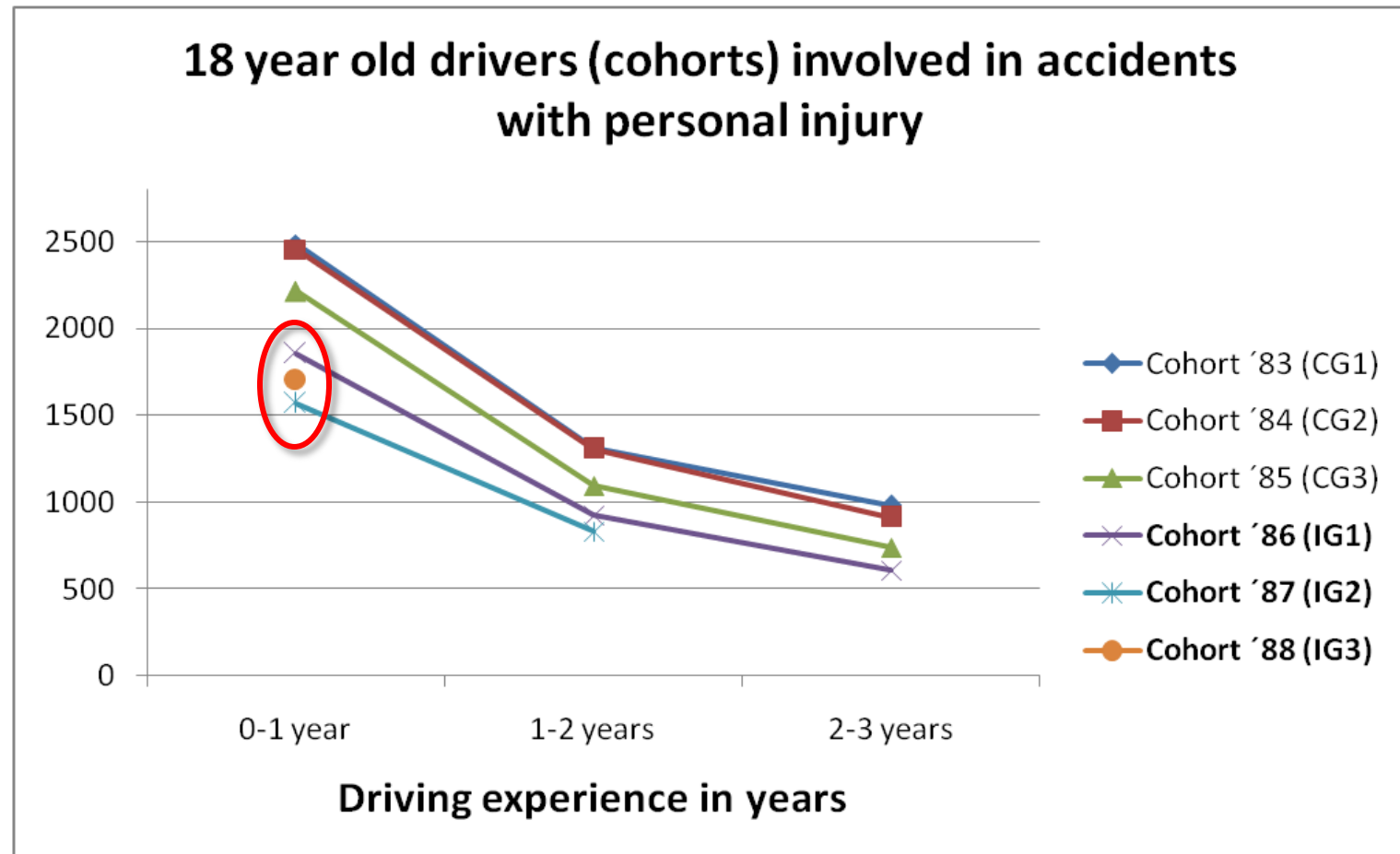
Time Series Analysis

24-30 year old drivers inv. in accidents with personal injury



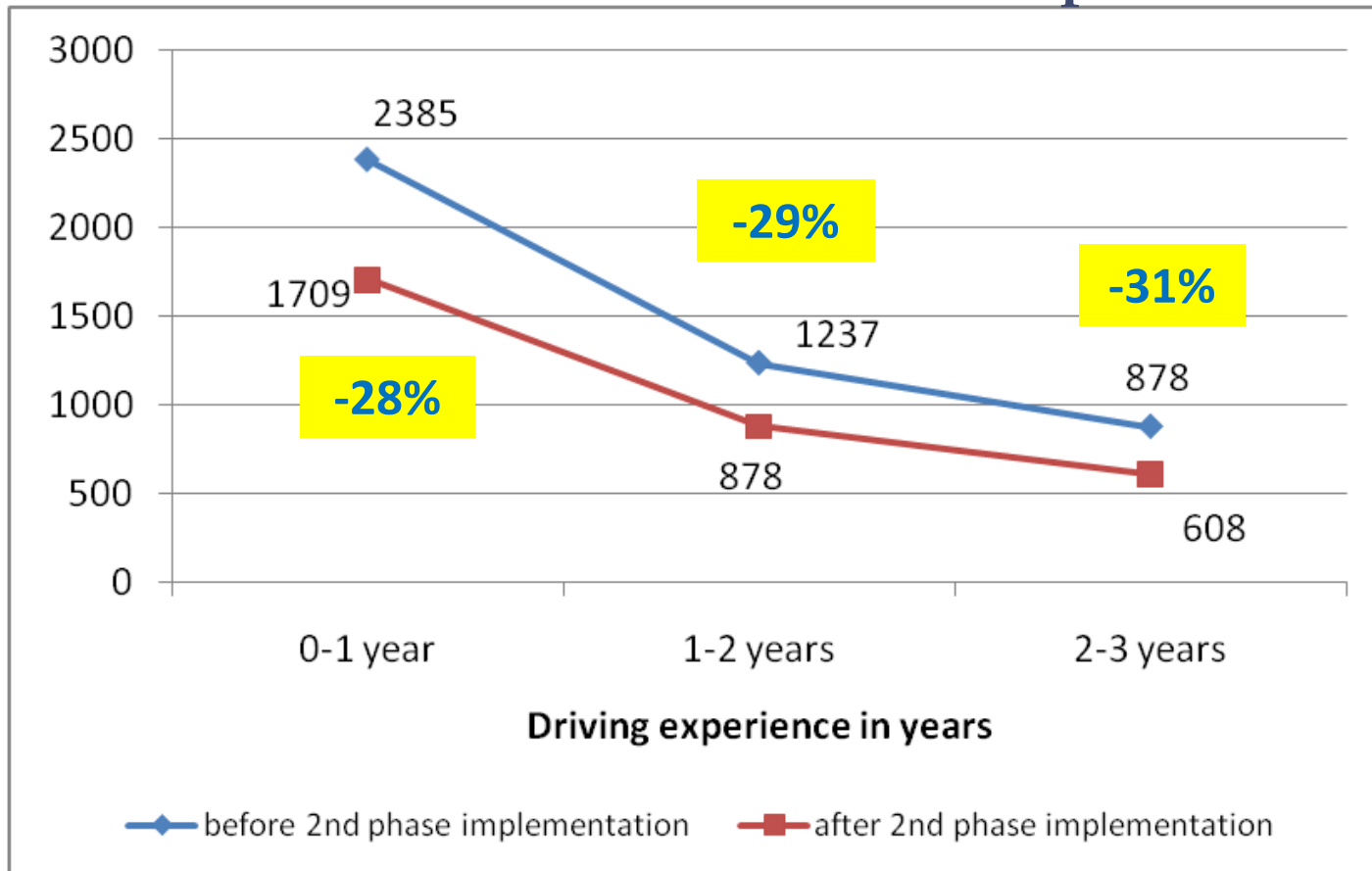
Model:ARIMA (1,0,1) Model Fit: $R^2=,989$

Evaluation results - Accidents



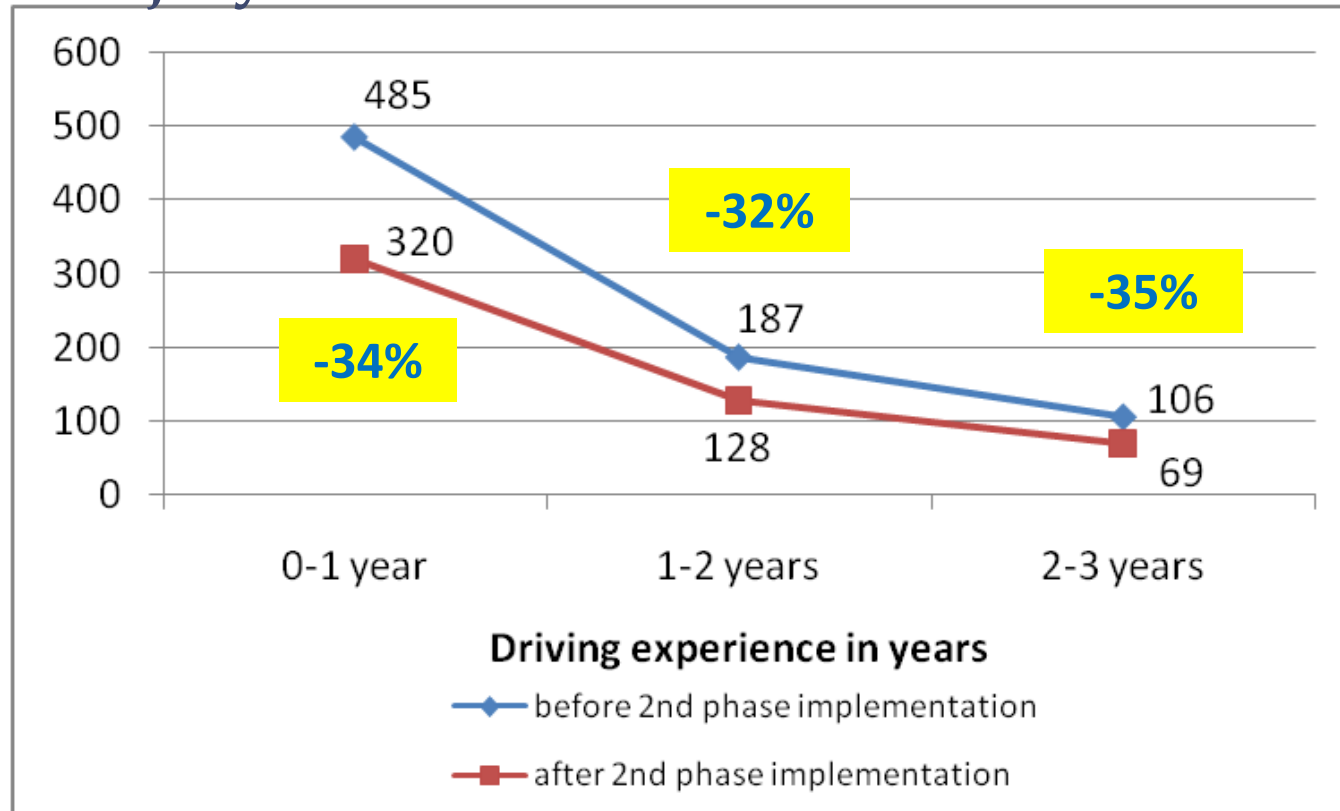
Evaluation results - Accidents

18 year old drivers* invol. in accidents with personal injury



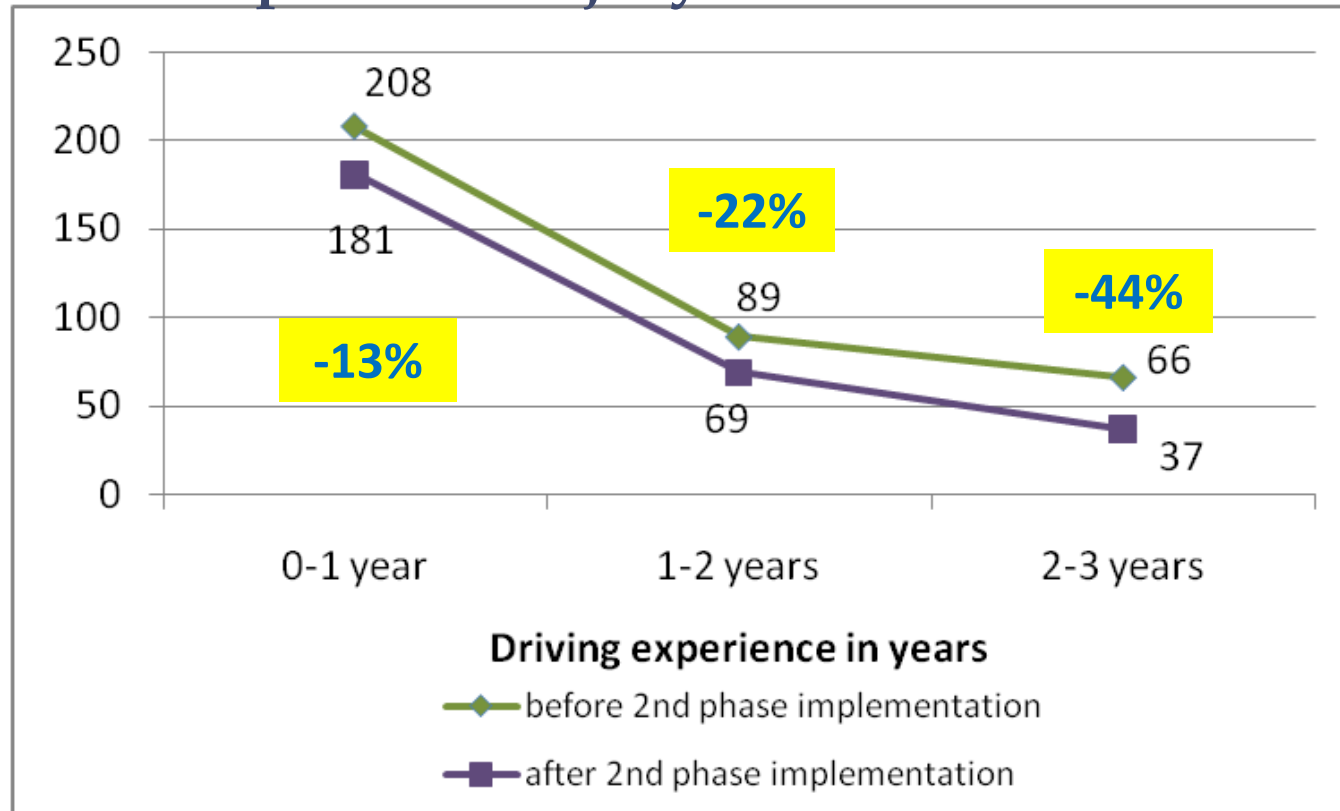
Evaluation results – Single Vehicle Accidents

18 year old male drivers invol. in single vehicle accidents with personal injury



Evaluation results – Single Vehicle Accidents

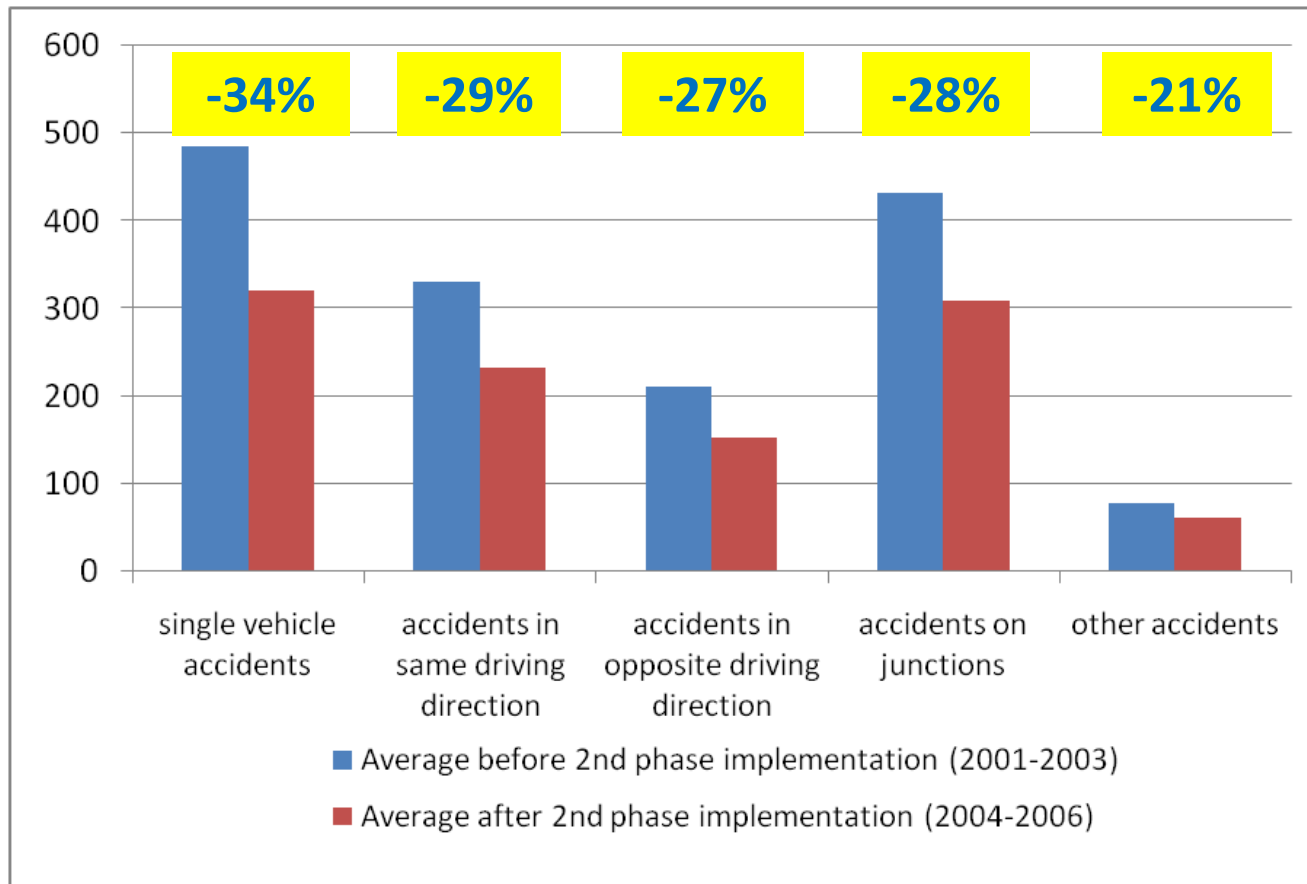
18 year old female drivers* involved in single vehicle accidents with personal injury



Other accident types

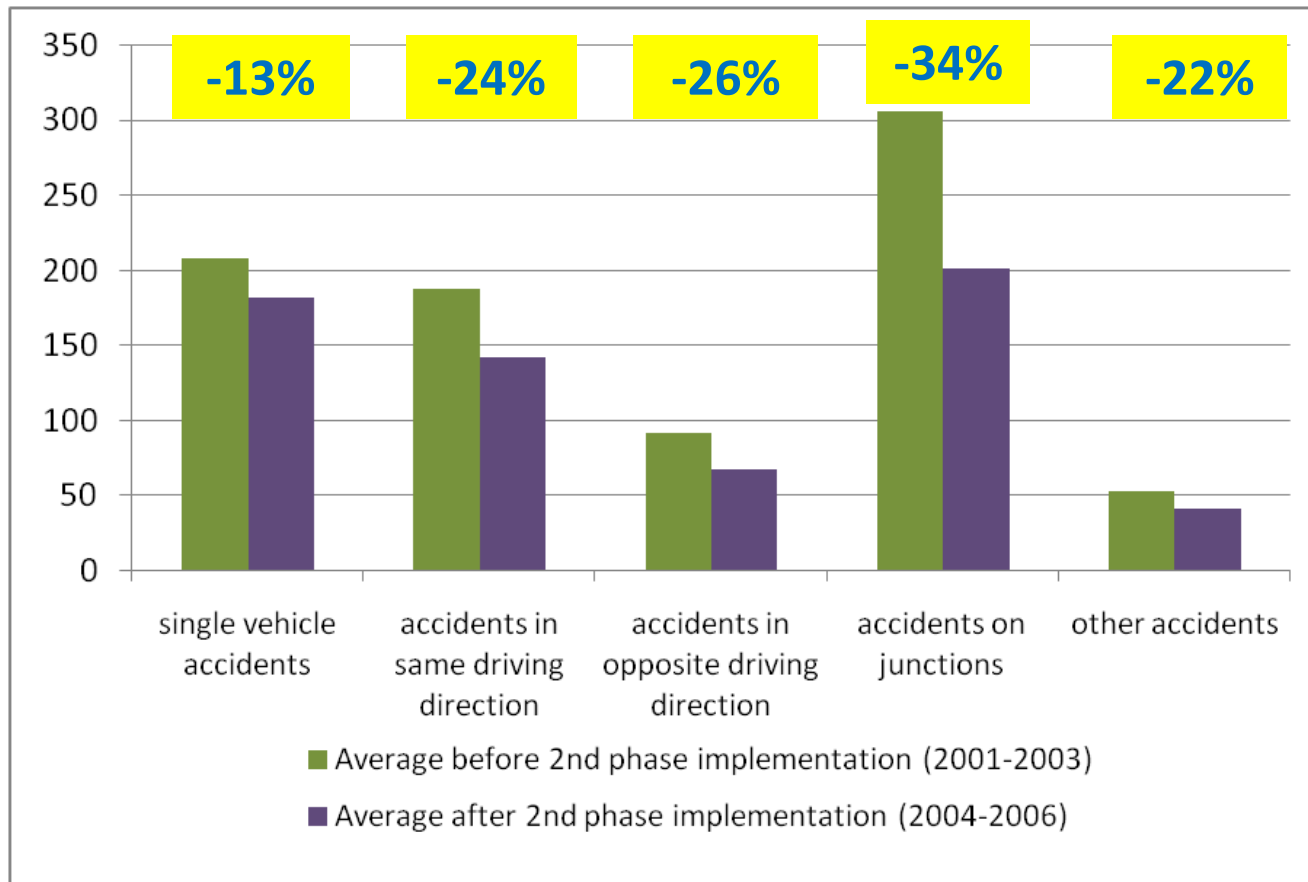
Evaluation results - Accidents

18 year old male drivers* invol. in several accident types with personal injury, in their first year of driving experience



Evaluation results - Accidents

18 year old female drivers* invol. in several accident types with personal injury, in their first year of driving experience



Process Evaluation

Evaluation results – Process evaluation

Process evaluation

(track training & group discussion)

- Expectations (before)
- Self assessment of driving skills (before - after)
- Attitudes (before - after)
- Assessment of skills for daily driving (after)

Evaluation results – Process evaluation

Description of sample:

Evaluation period: Spring-Summer 2007

Novice drivers (cat. B only) completing their track training day

Sample size: n=2560, 2 separate groups:

n=1279 (before), n=1281 (after)

Evaluation results – Process Evaluation

Expectations

„From the track training I expect...

...to know the boundaries of my vehicle

...to master risky situations better

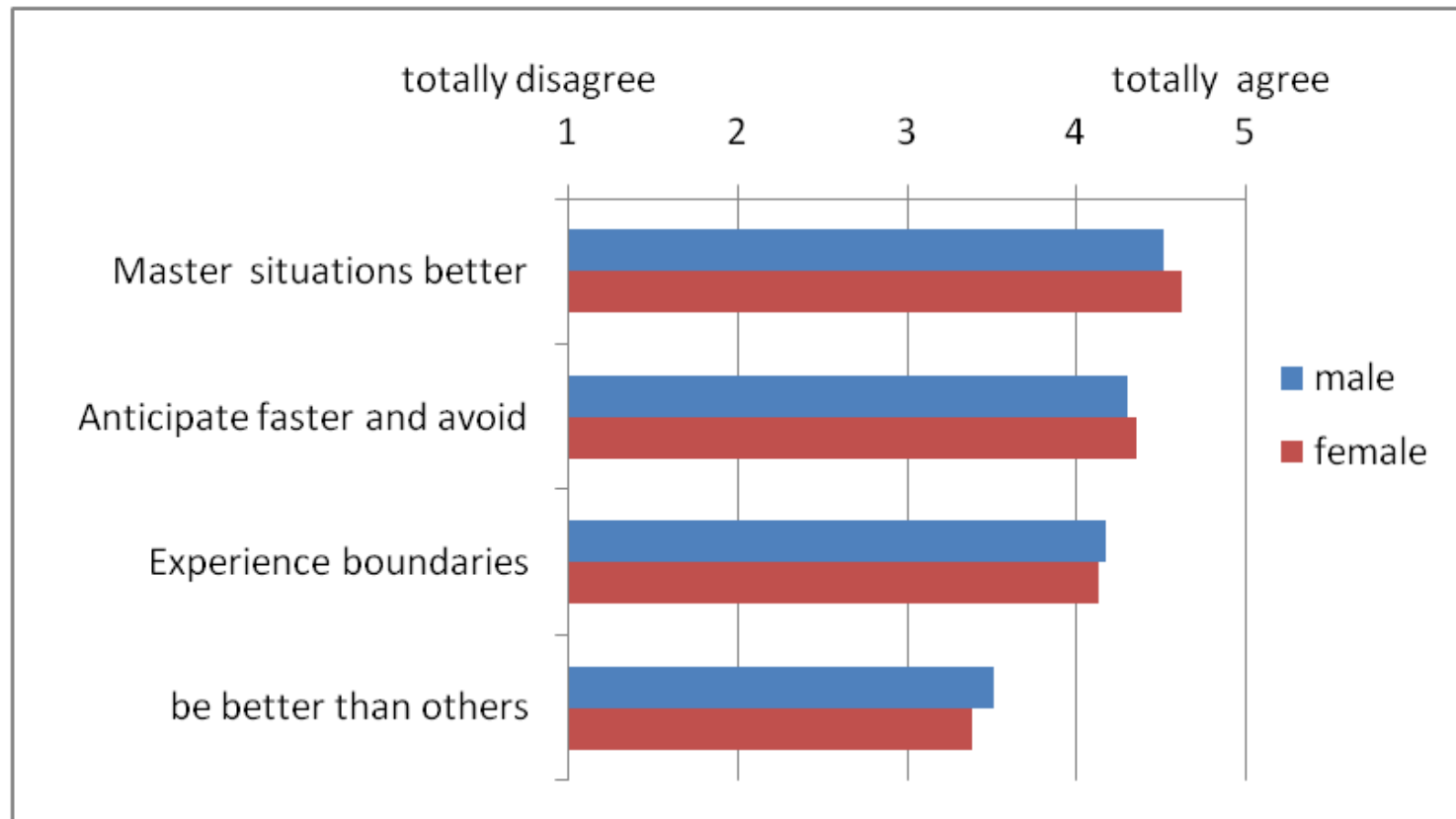
...to anticipate risky situations faster to avoid them

...to be a better driver compared to drivers who didn't attend the course“

Response format: „totally disagree“ (1) to „totally agree“ (5)

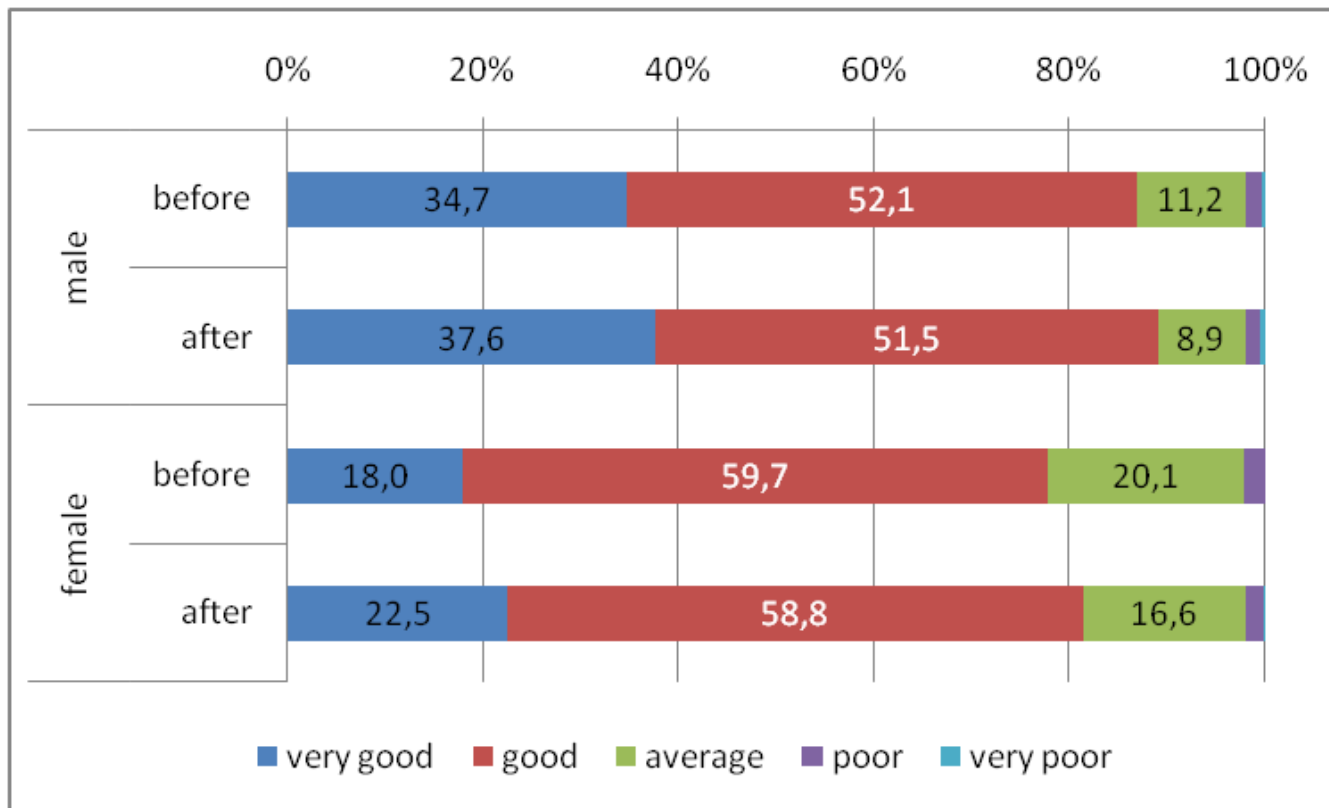
Evaluation results – Process Evaluation

Expectations: results



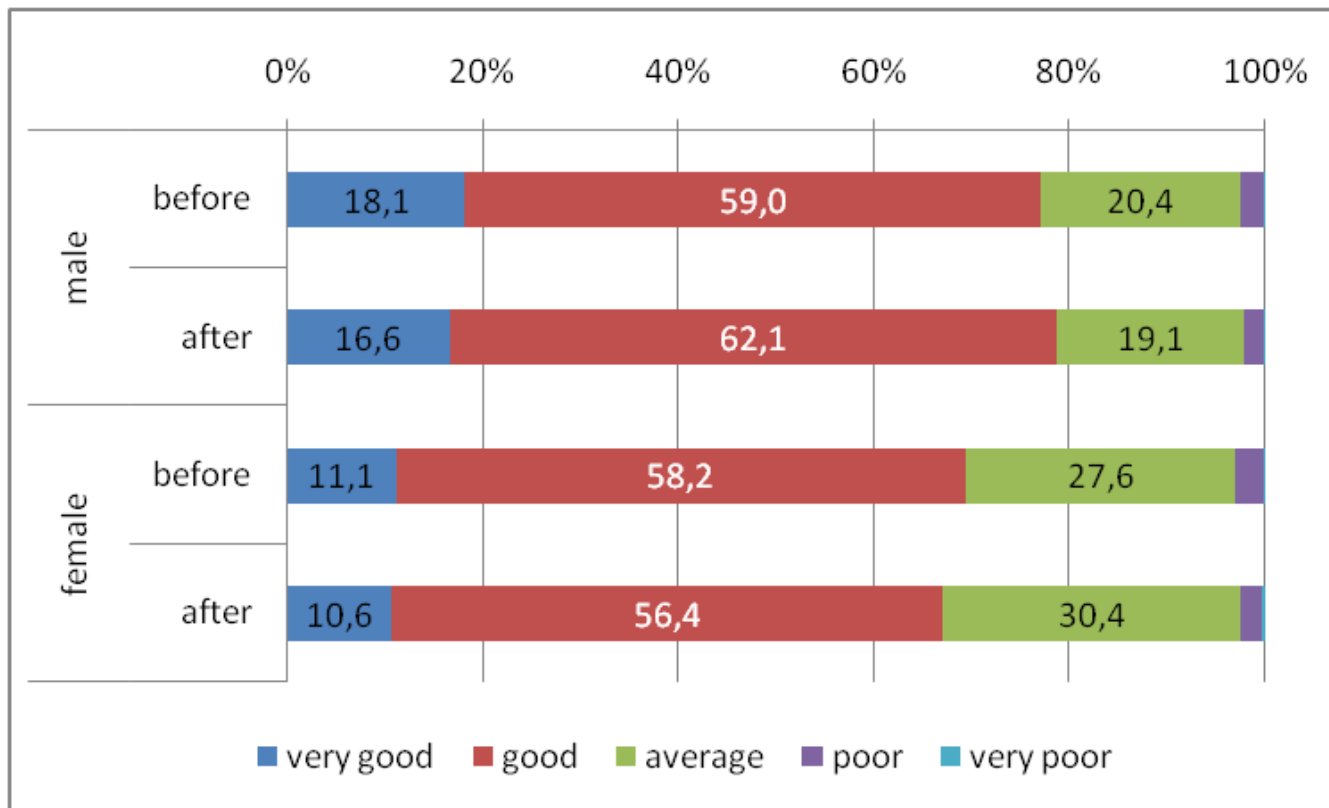
Evaluation results – Process Evaluation

How do you assess your competence regarding....
vehicle handling?



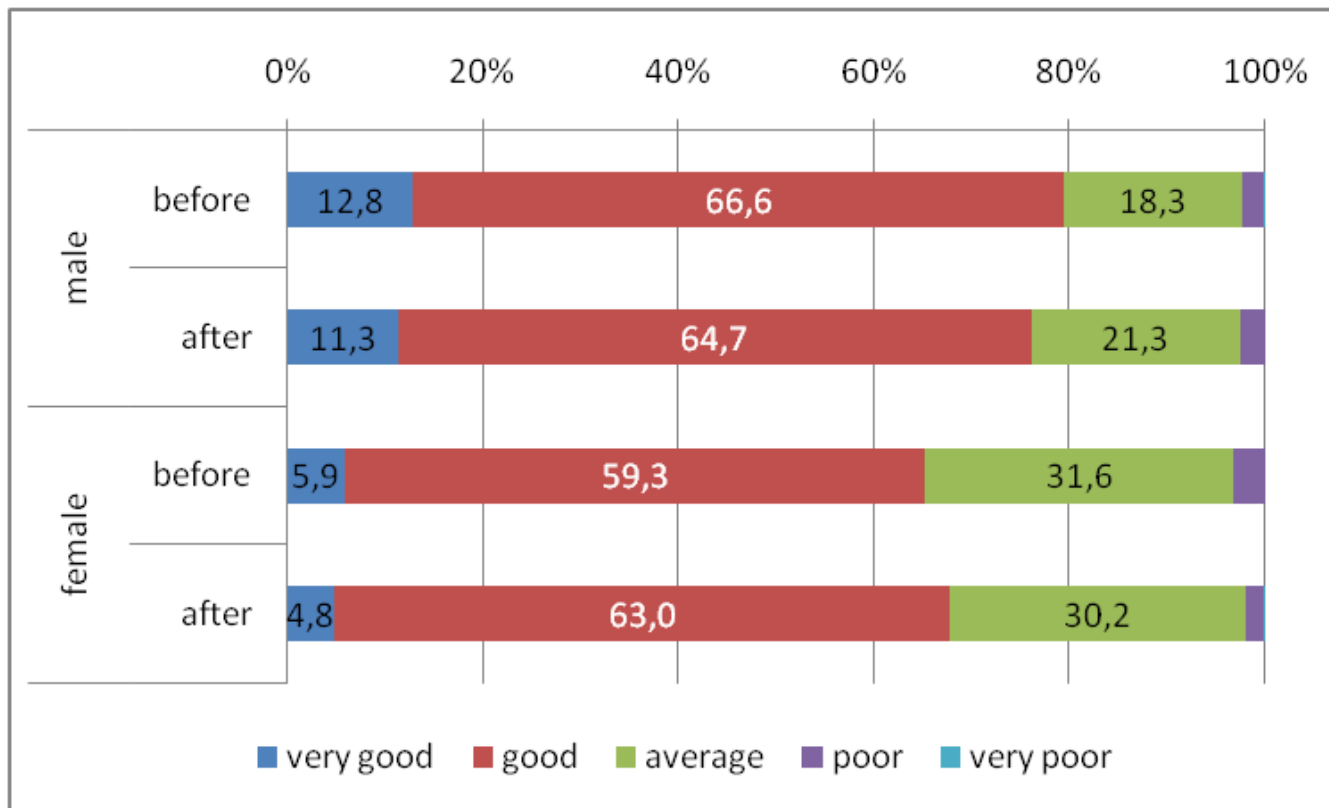
Evaluation results – Process Evaluation

How do you assess your competence regarding....
anticipation of risky situations?



Evaluation results – Process Evaluation

How do you assess your skills regarding....
your overall competence?



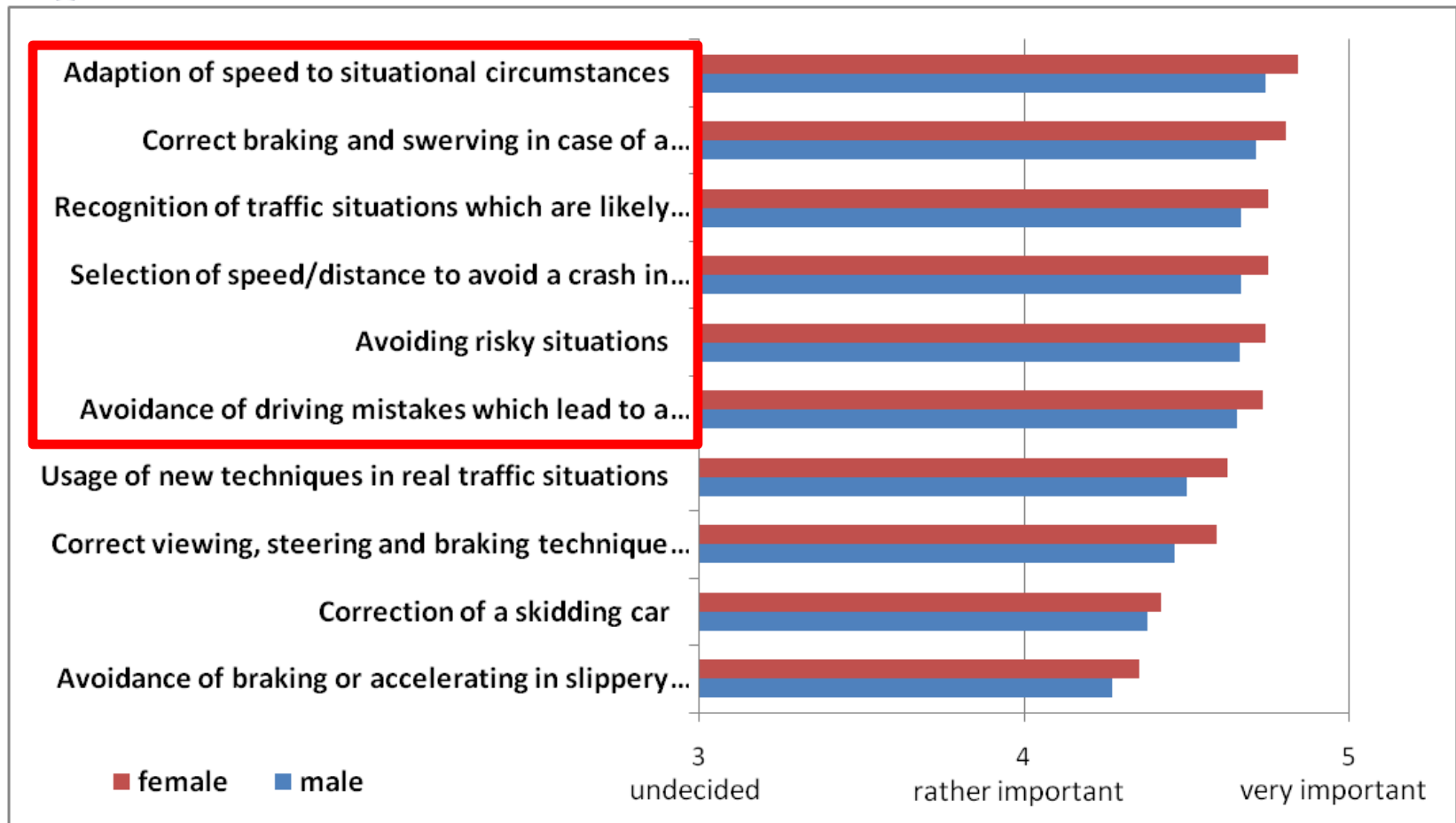
Evaluation results – Process Evaluation

Assess the importance of the following skills for your personal daily driving routine?

1. Recognition of traffic situations which are likely to cause an accident
2. Correction of a skidding car
3. Avoidance of braking or accelerating in slippery curves
4. Selection of speed/distance to avoid a crash in case of emergency braking
5. Adaption of speed to situational circumstances
6. Correct viewing, steering and braking technique in case of skidding
7. Usage of new techniques in real traffic situations
8. Avoiding risky situations
9. Correct braking and swerving in case of a suddenly appearing obstacle
10. Avoidance of driving mistakes which lead to a loss of control over the vehicle

Evaluation results – Process Evaluation

Importance of skills:



Nationwide Survey

Nationwide Survey

- Beliefs and attitudes (before – after implementation)
- Exposure
- Self-reported accidents & offences
- Pass-rates of driving test (before – after implem.)
- Satisfaction with single modules

Evaluation results – Survey

Description of sample:

Survey period: Spring-Summer 2007

Sample sizes:

„Control group“ (CG2002) n=719 („BASIC“ study),

„Intervention group“ (IG2007) n=738

Samples representative and comparable

Evaluation results – Survey

Beliefs & Attitudes:

Several statistical differences (before & after) regarding self-reported behaviours , e.g.

- driving style,
- speed choice,
- wearing of seatbelts, etc.

However, differences are rather small (average 0,2 Grades!)

Exposure:

No statistical differences regarding mileage or car characteristics (vehicle age, engine power) observed

Evaluation results – Survey

Self reported accidents & offences:

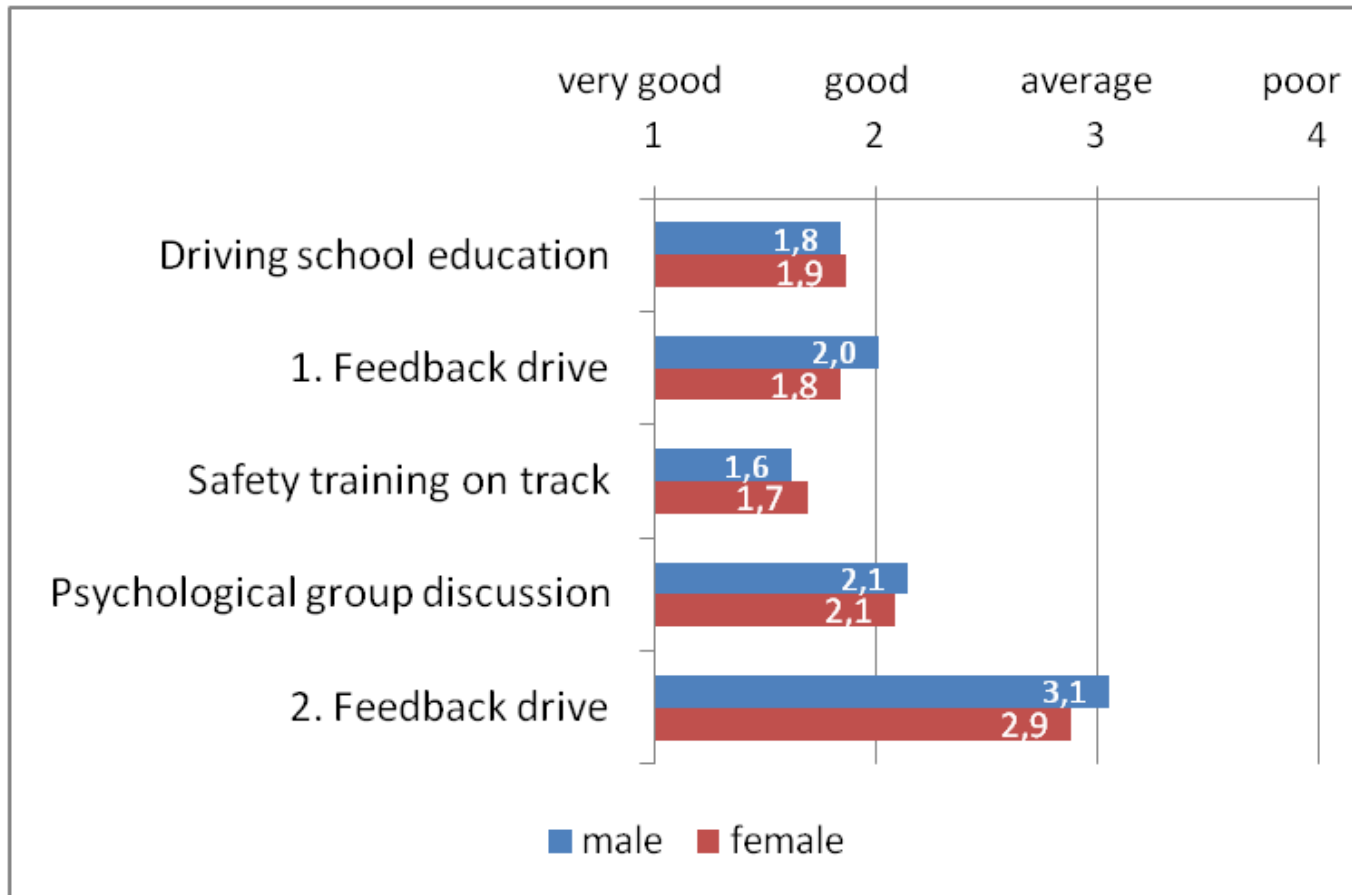
Bigger (significant) differences occurred concerning self-reported

- **overall number of accidents (IG reported less)**
- **number of offences (alcohol & other) (IG reported less)**

The latter may be biased by varied enforcement activities!

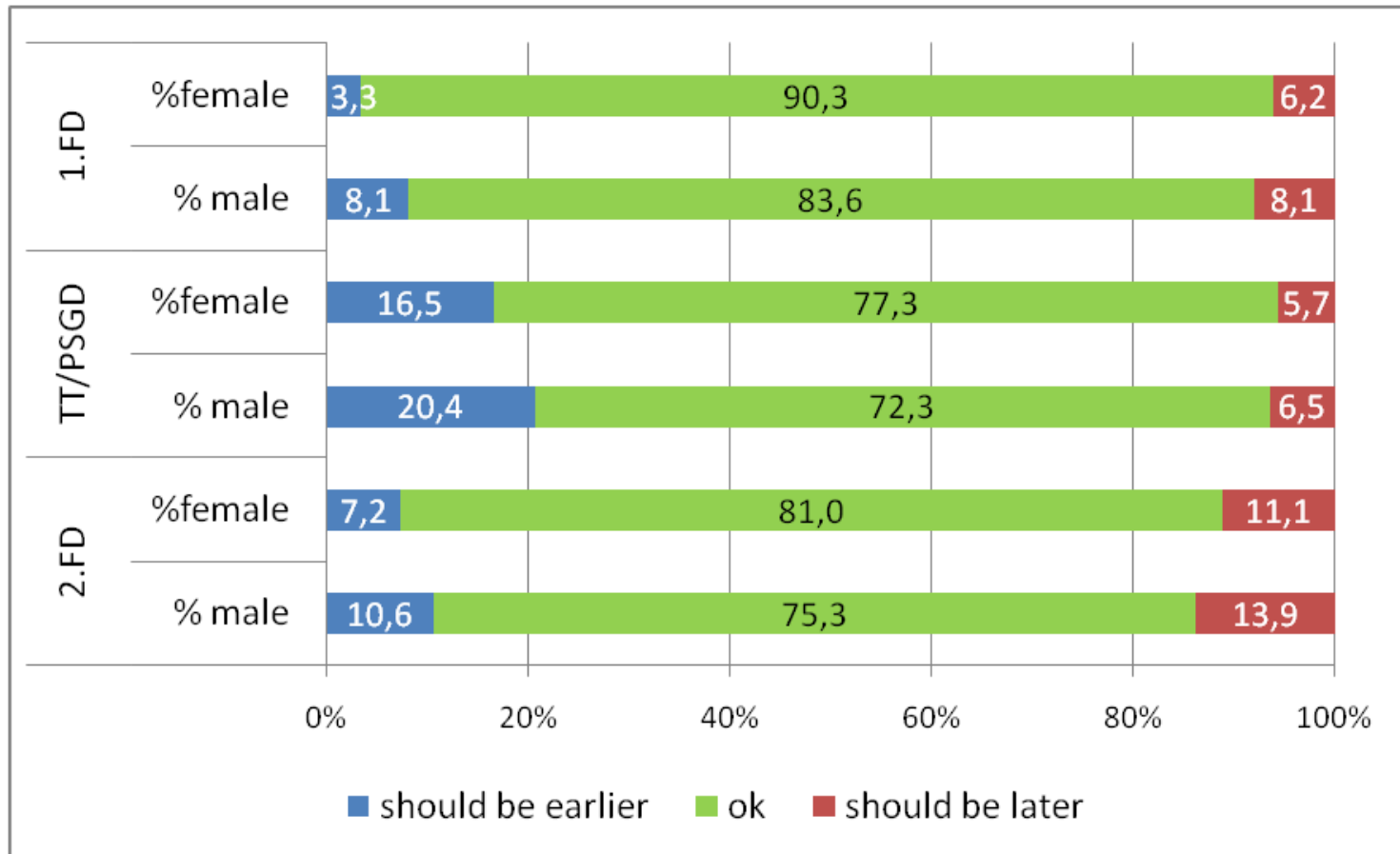
Evaluation results – Survey

Satisfaction with modules:



Evaluation results – Survey

Satisfaction with time frames:



Conclusions & Outlook

Conclusions & Outlook

Key conclusions with reference to the...

...accident analysis:

- significant reduction of accidents within young, novice drivers
- reduction of single vehicle accidents caused by male drivers

...process evaluation:

- optimize expectations
- track training delivers the „right“ message

...national survey:

- minor changes in attitudes & self-reported behaviours
- positive changes in self-reported accidents
- good acceptance of modules,
- re-design of 2nd feedback drive

Conclusions & Outlook

Key conclusions with reference to the...

...analysis of License Register:

- optimisation of time frames (track training day)
- the implementation of did system did not lead to a decreased number of issued licences

Outlook

We are on the right way, but there is potential for further improvement:

- Development of a comprehensive quality assurance system
- Standardized “postgraduate” education for professionals
- Development of a (technical) system to better control for real exposure
- Evaluation of effects for category A

Puno hvala!

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