International ESRA Conference

Traffic Safety Culture and Performance Indicators

Subjective safety & risk perception: relationship between subjective safety and accident statistics

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Université Gustave Eiffel

ESRA
www.esranet.eu
E-Survey of Road users' Attitudes

Subjective safety as a concept

- Feeling safe / unsafe in traffic or anticipation of being safe / unsafe in traffic
- Fear of being involved in an accident
- Relationship between subjective and objective traffic safety is assumed to be minor (SWOV, 2012)
- Which level of subjective safety is desirable from a traffic safety perspective?

Item used in the ESRA2 questionnaire

How safe or unsafe do you feel when using the following transport modes in your country?

0 = very unsafe
10 = very safe

Risk perception as a concept

- Common ground with ‚subjective safety‘
- No agreed-upon definition / operationalisation (Shinar, 2017)
- Sensitive to biases (overestimation / underestimation)

Item used in the ESRA2 questionnaire

How often do you think each of the following factors is the cause of a road crash involving a car?

1 = never

6 = (almost) always

Subjective safety and risk perception

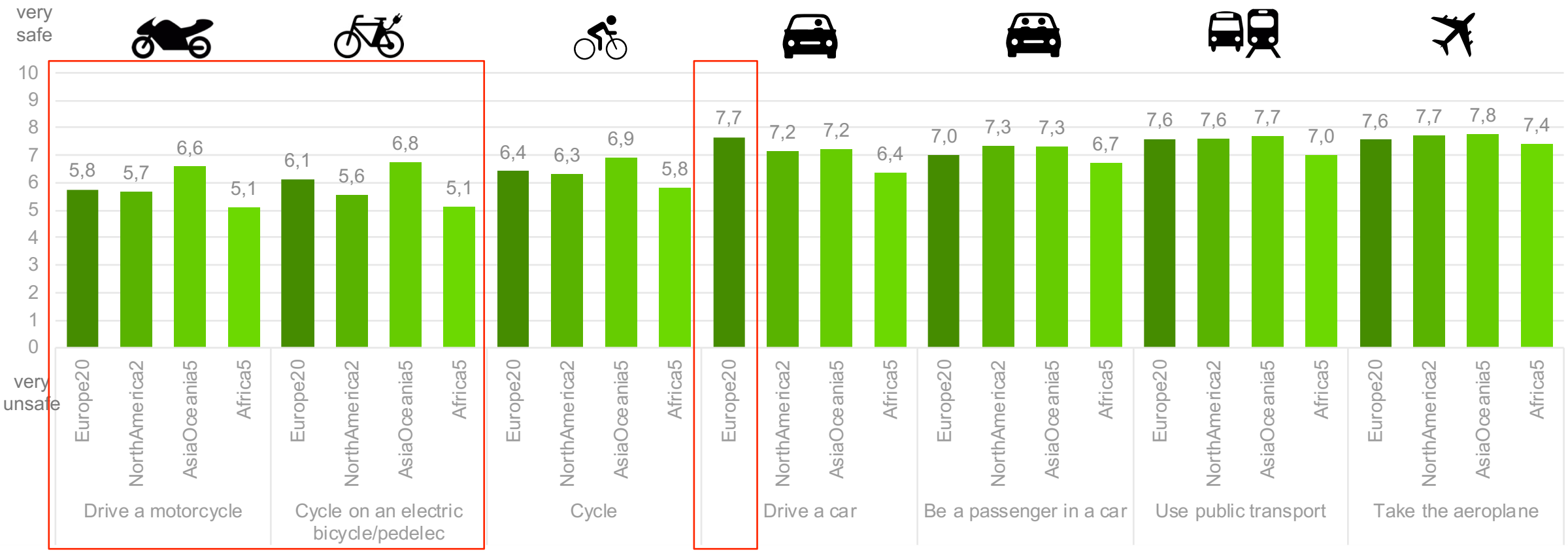
Descriptive Analyses

- Subjective Safety – Feeling safe/unsafe using
- Risk perception – Perceived causes of car crashes

Further analyses

- Interrelation of subjective safety and road fatalities

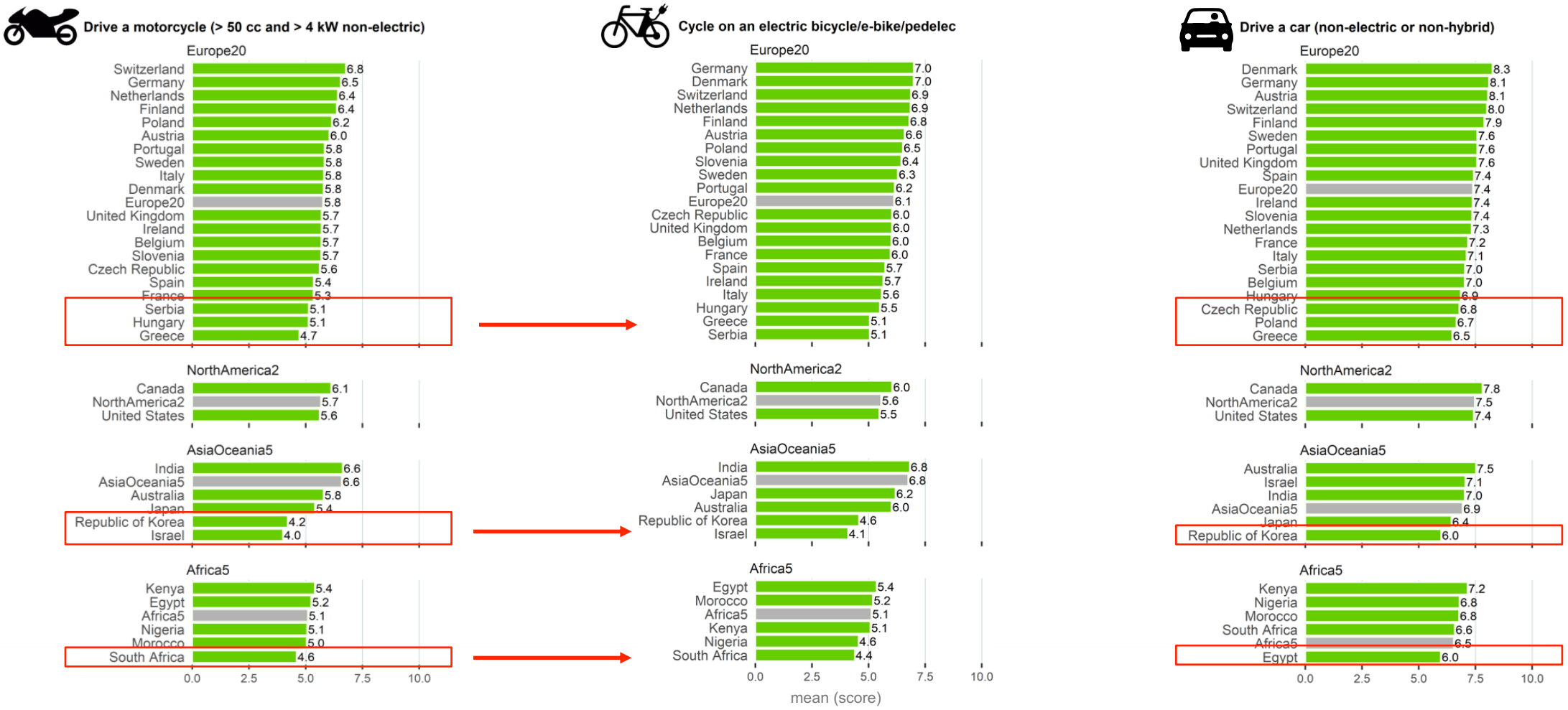
Feeling safe: regions



mean (score)

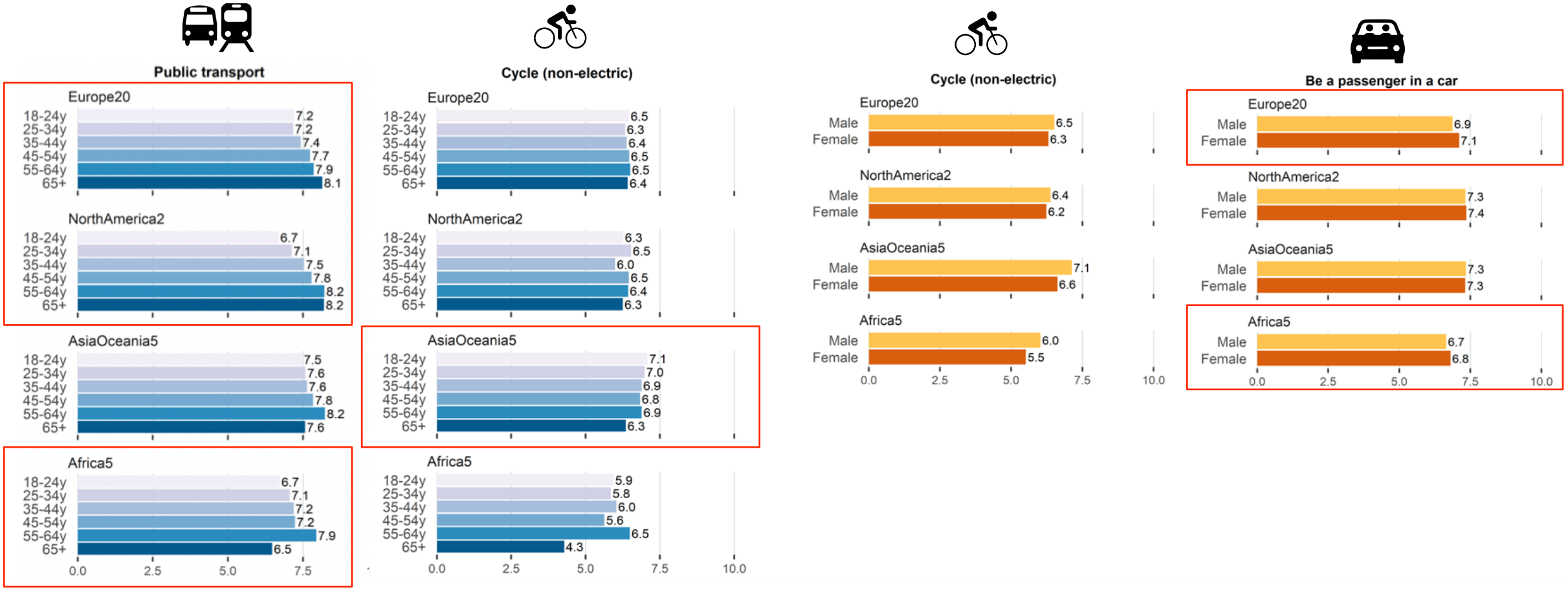
Reference population: all road users who use the respective transport type in the past 12 months

Feeling safe: countries



Reference population: all road users who use the respective transport type in the past 12 months

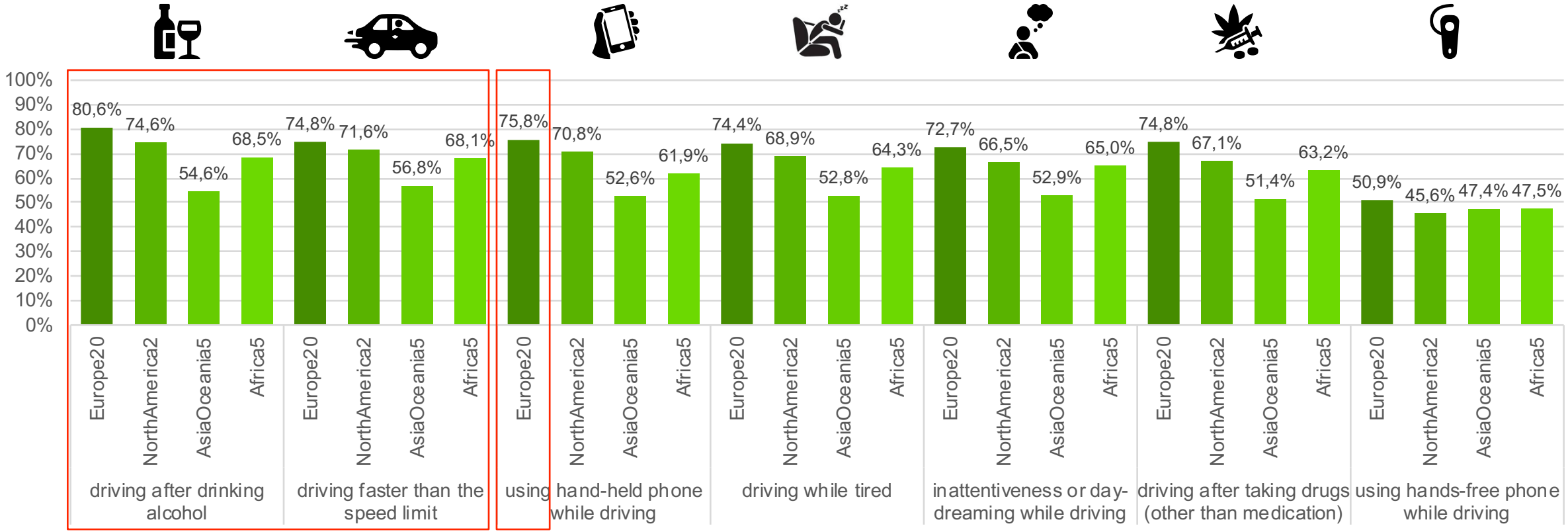
Feeling safe: age & gender



mean (score)

Reference population: all road users who use the respective transport type in the past 12 months

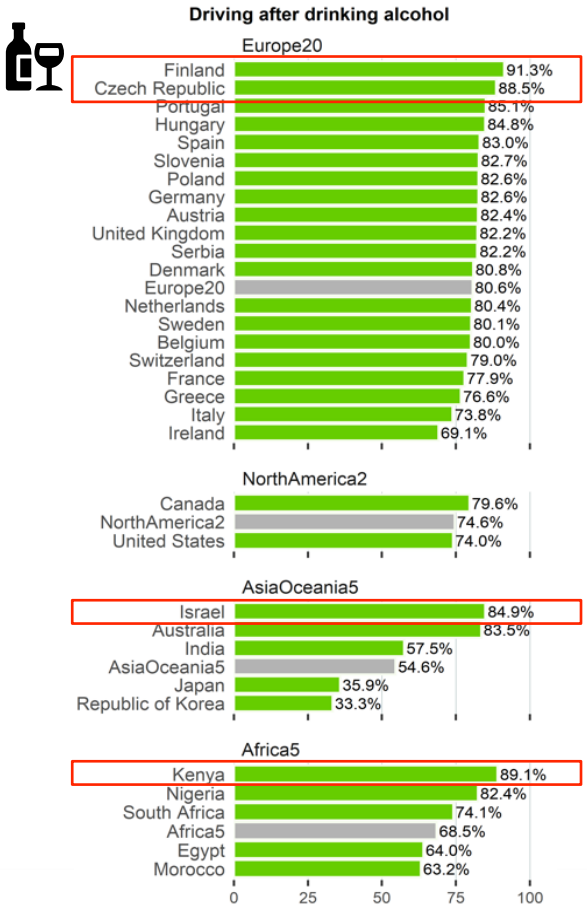
Perceived causes of crashes: regions

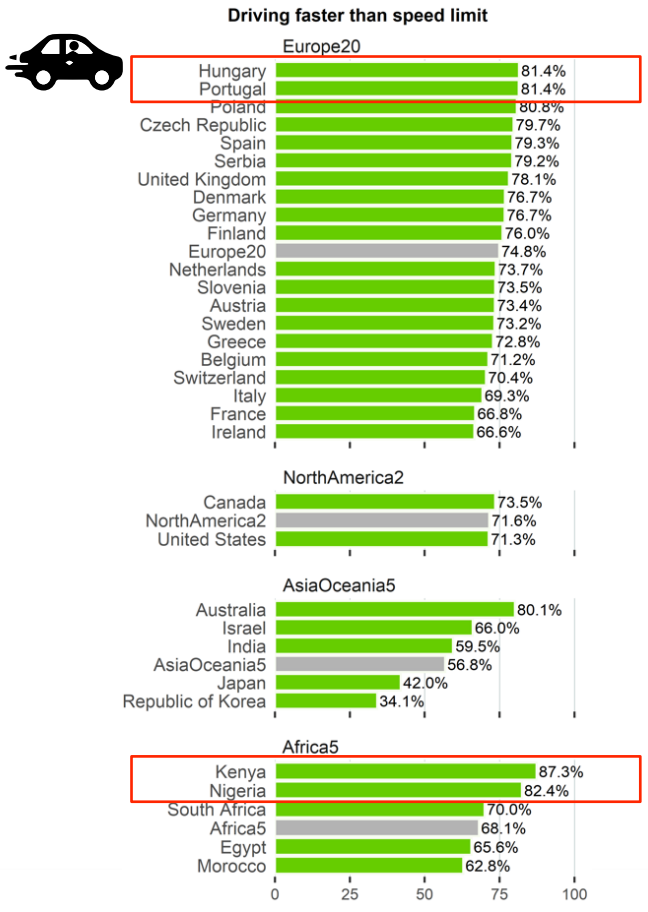


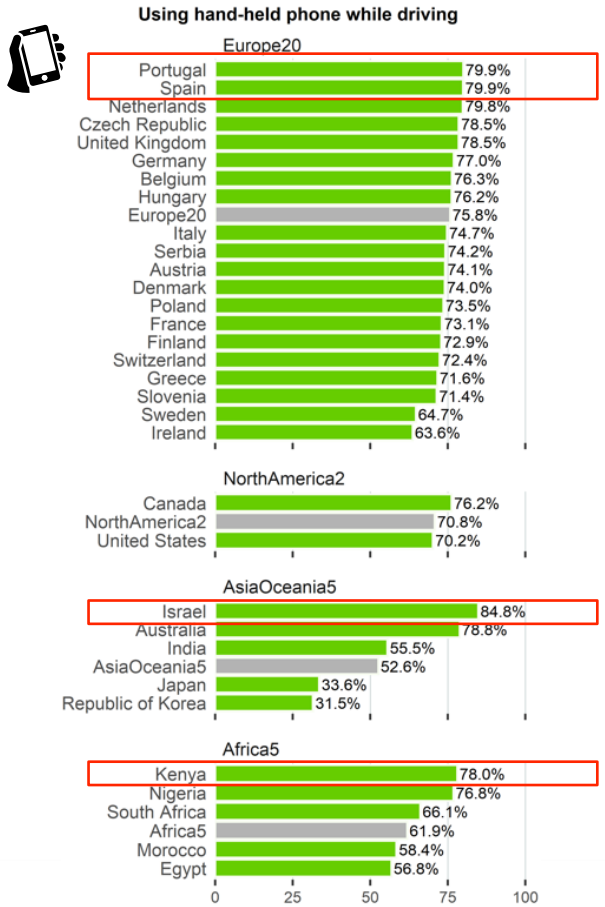
% often/frequently

Reference population: all road users

Perceived causes of crashes: countries



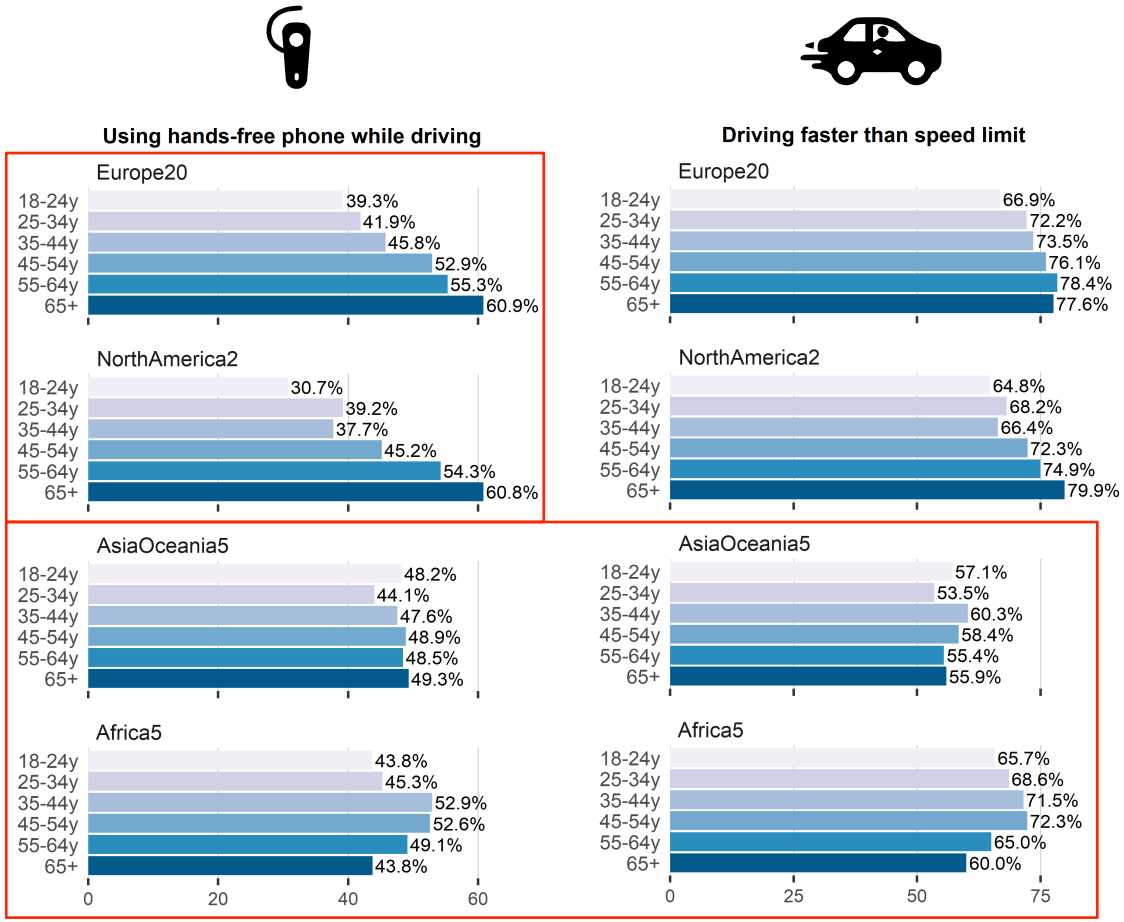


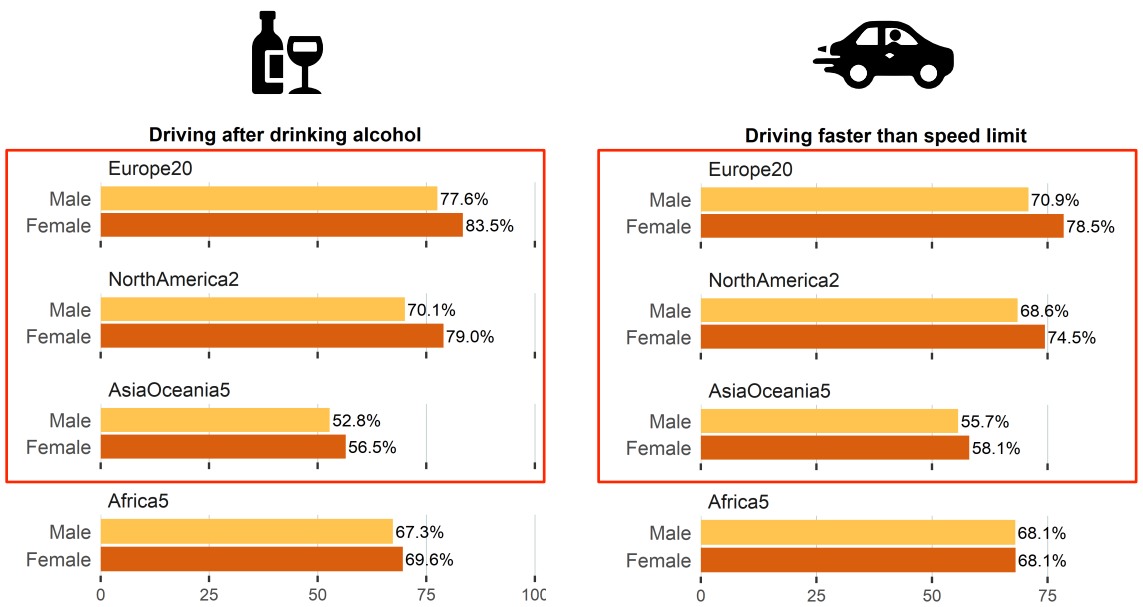


% often/frequently

Reference population: all road users

Perceived causes of crashes: age & gender

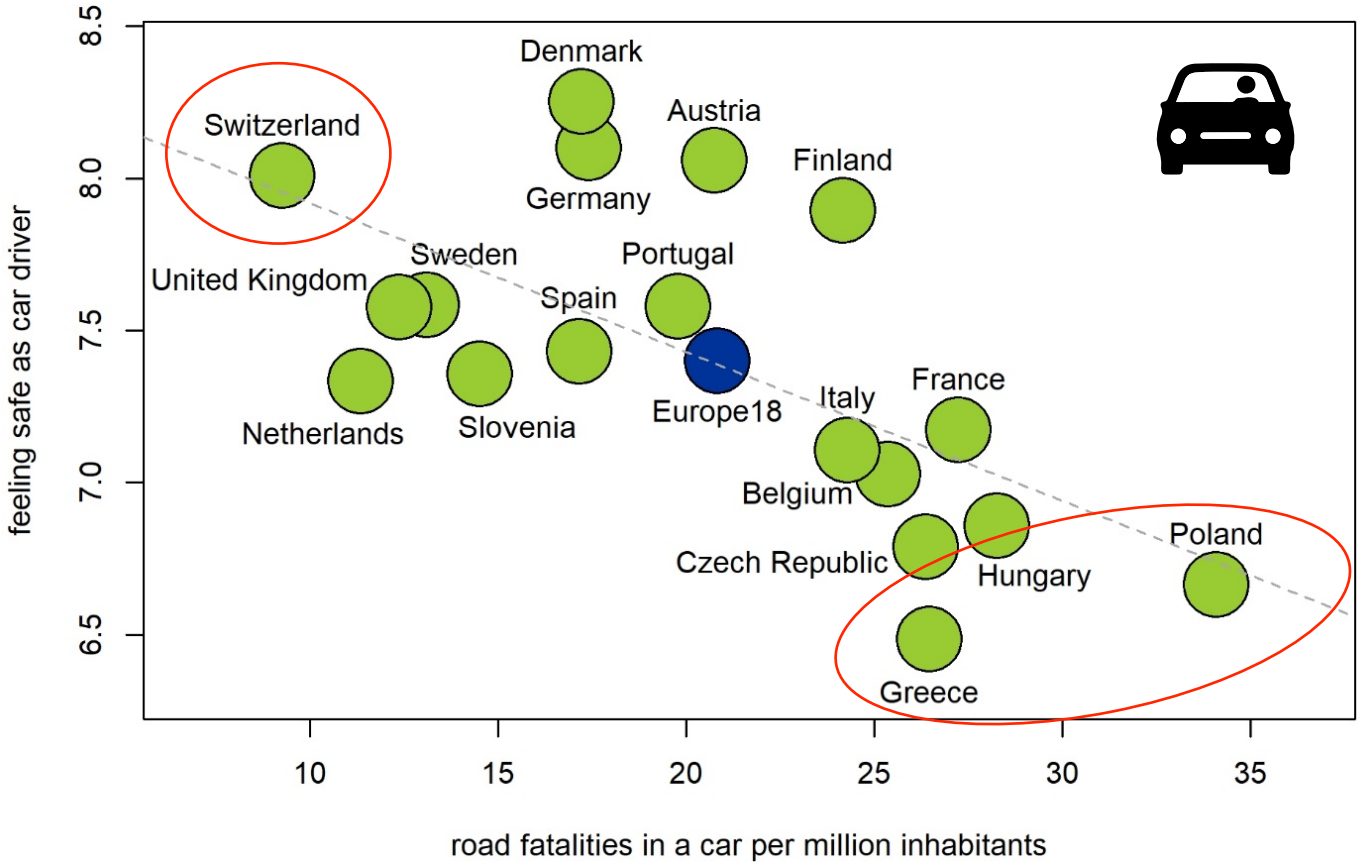




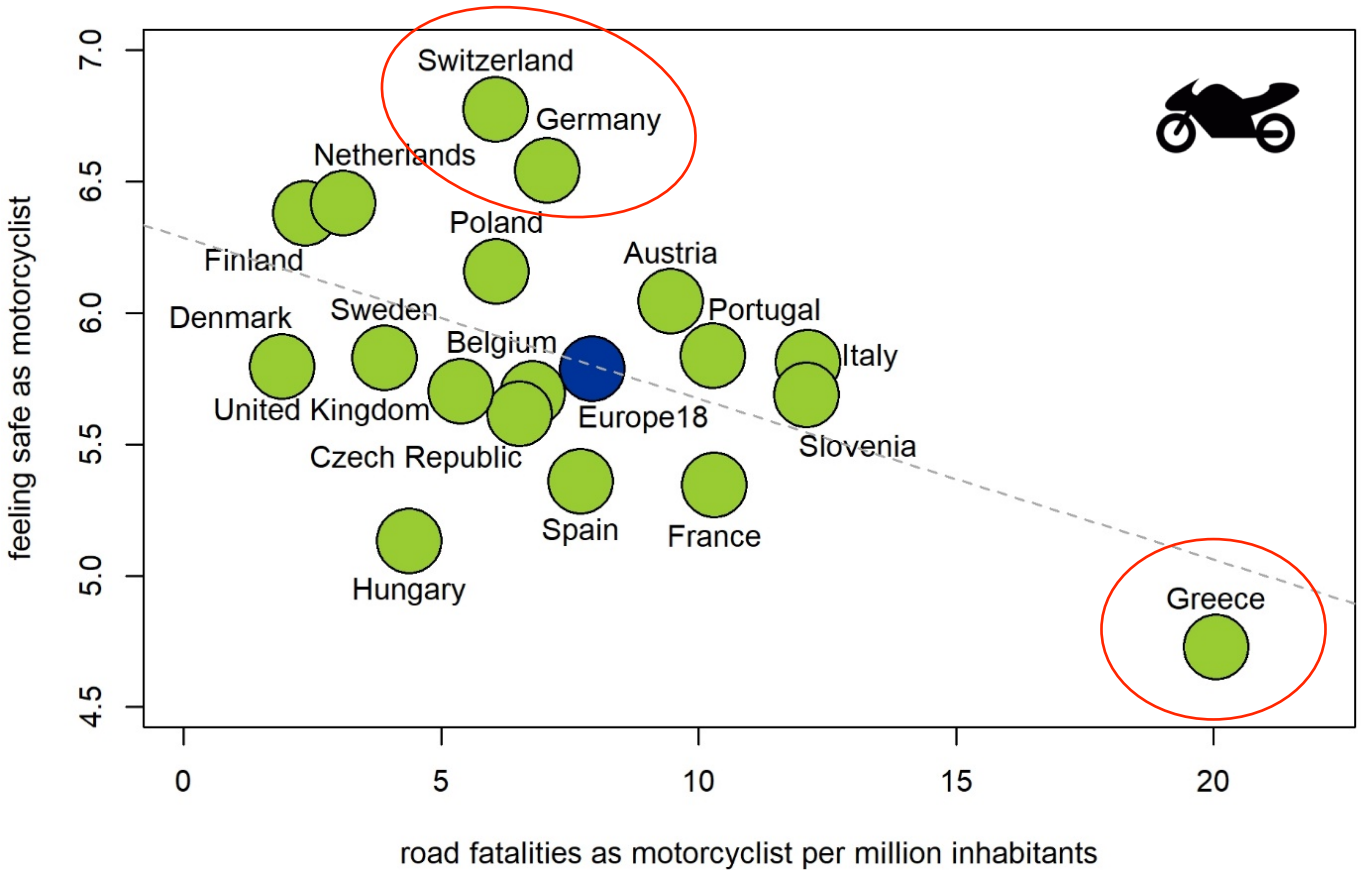
% often/frequently

Reference population: all road users

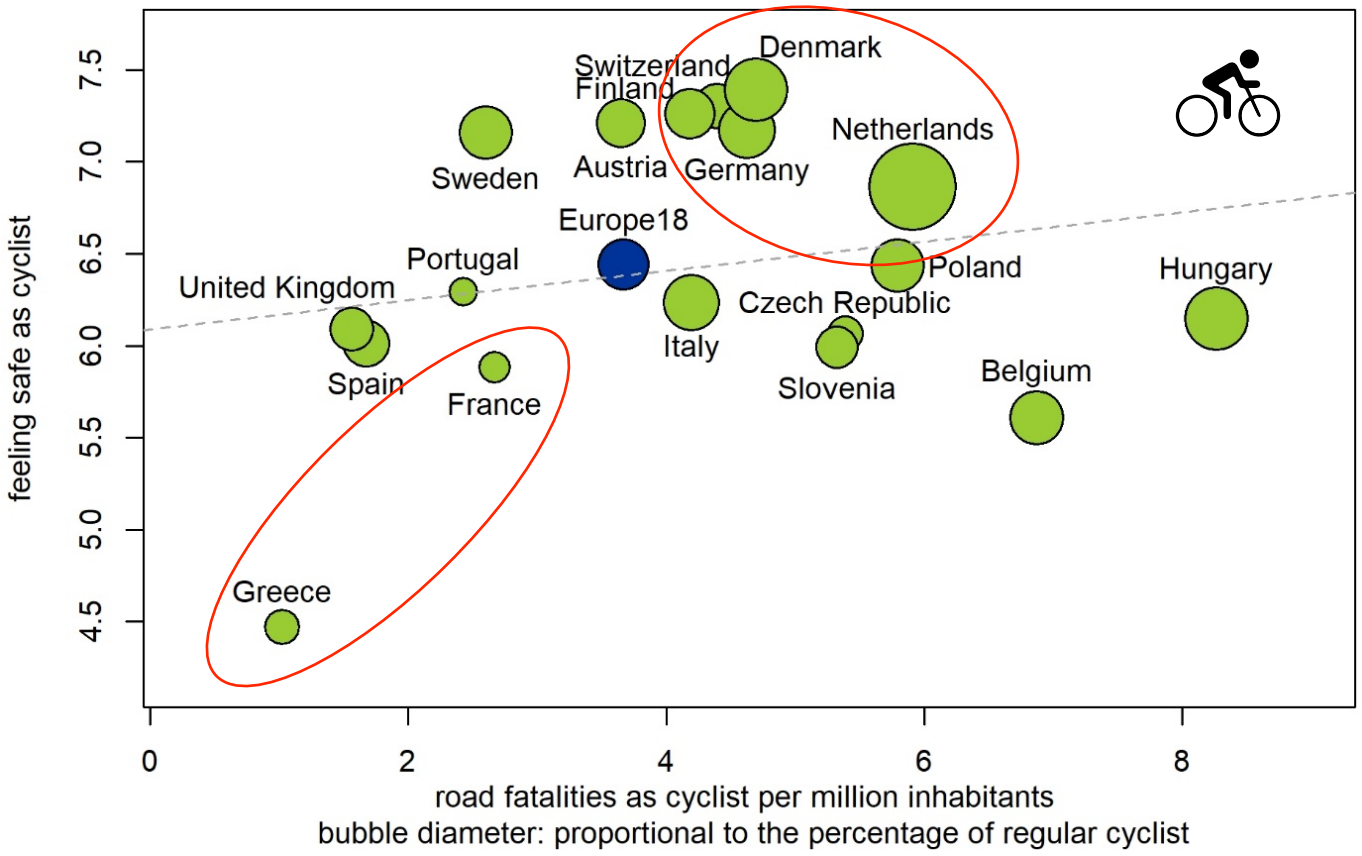
Interrelation of subjective safety and road fatalities (CARE data base, 2017): car drivers



Interrelation of subjective safety and road fatalities: motorcyclists



Interrelation of subjective safety and road fatalities: cyclists



Summary & Discussion

- **Subjective safety**
  - Results in line with findings of ESRA1
  - Level of subjective safety for cycling higher in ESRA2 compared to ESRA1 ('safety in numbers' and investments in cycling infrastructure)
  - Car drivers and motorcyclists tend to feel safer in countries with a small number of road fatalities in a car / as motorcyclist and cyclists tend to feel safer in countries where the fraction of frequent cyclists among all cyclists is high

- **Risk perception**
  - **DUI** (alcohol) and **speeding** considered as most frequent causes of crashes
  - Women tend to estimate risk factors to be higher than men for Europe (in line with results of ESRA1)

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KFV
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Further Information:

Thematic Report on Subjective Safety and Risk perception

https://www.esranet.eu/en/publications/