

Fit to Drive

4th International Traffic Expert Congress
Tallinn from June 4th - 5th 2009



Welcome



Driving circumstances and accidents among novice drivers

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The aims of the study:

- to get information on quantity and quality of driving exposure in the beginning of driving career
- to compare driving exposure of young and middle-aged male and female novice drivers
- to estimate motor vehicle accident risk in different driving circumstances (and purposes)

Accident risk in relation to exposure: Challenges in research on estimating accident risk

- Exposure data difficult to obtain

by survey it's possible to get information on quantity and quality of driver's exposure and accidents at the same time.

- Reliability of self-reports?
- Driving experience and age of driver are often confounded

by studying novice drivers of different age we can control the effect of experience. However, the problem of selection still exist: to obtain driver's licence in middle-age is rare phenomenon and possibly somehow biased.

Method: survey on the amount of driving in different driving purposes and circumstances and accidents

- Random sample of novice drivers, exposure and accidents during the first two years after licencing. Response rate: 48 %
- 18-21 years (n= 6 847, 56 % females)
- 25-59 years (n= 942, 72 % females)
- Proportion of different driving purposes: leisure-time, work/school, on errands, at work/occupation, just for fun
- Proportion of different driving circumstances: with passengers, in built-up areas, during evenings and at nights, in slippery road conditions, in darkness

RESULTS

Amount of kilometres (mean) and proportion of drivers with at least 1 self-reported accident:

Young males: 19 800 kms (20 %)

Young females: 10 900 kms (16 %)

Middle-aged males: 26 800 kms (7 % of middle-aged males and females)

Middle-aged females: 10 800 kms



Self-reported driving purposes

= percentage of all driving kilometres





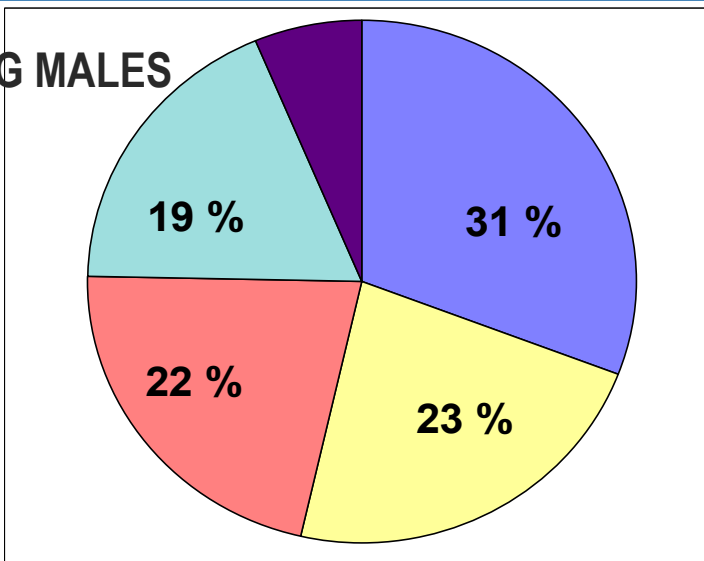
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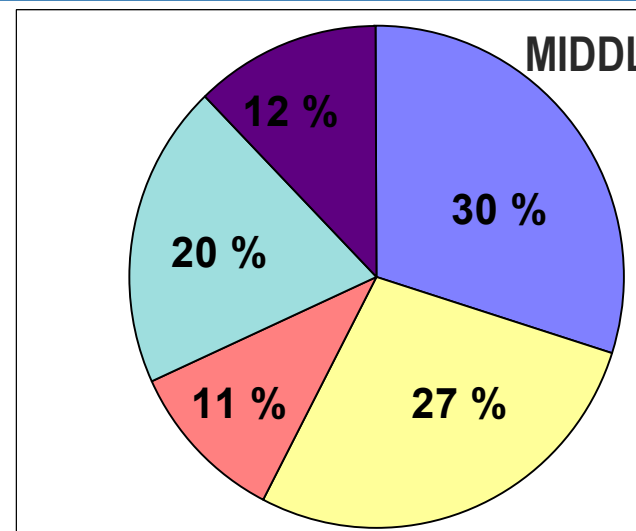


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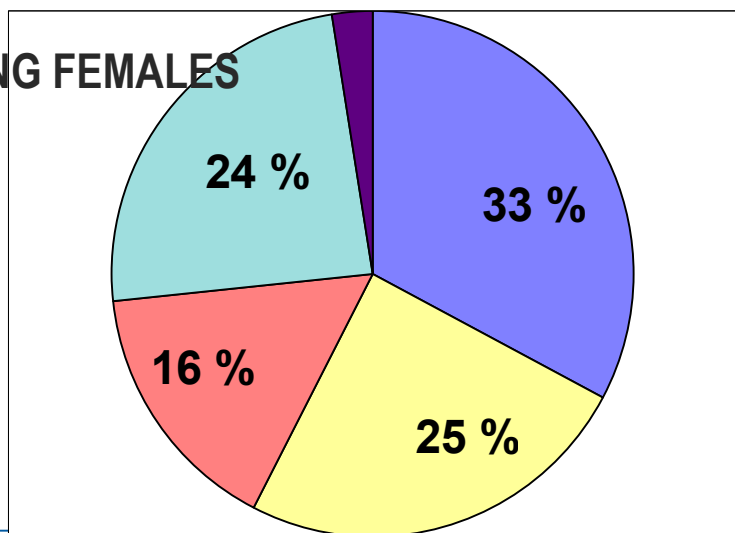
YOUNG MALES



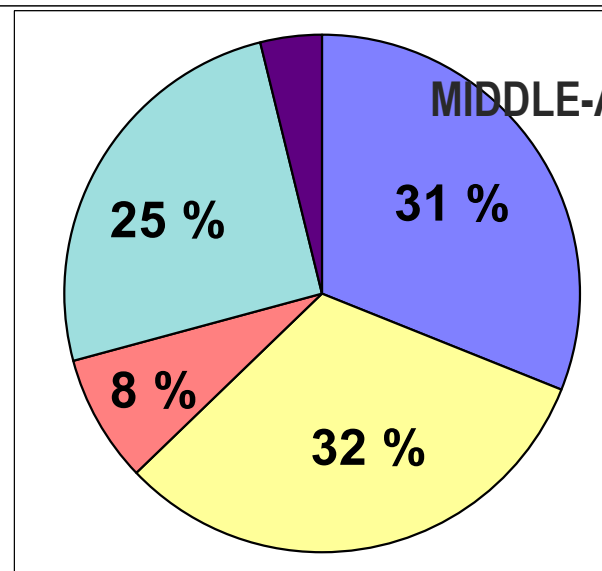
MIDDLE-AGED MALES



YOUNG FEMALES

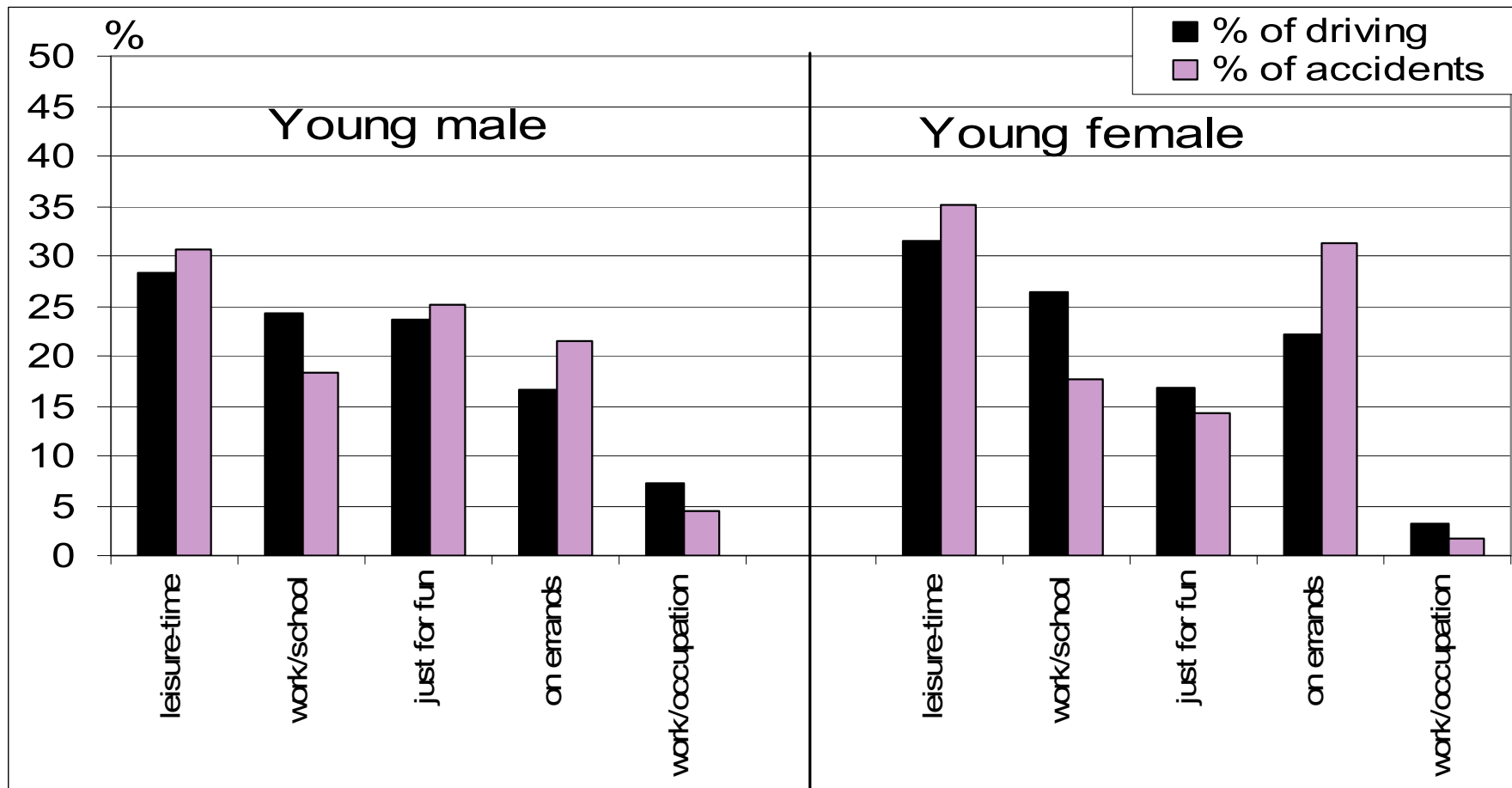


MIDDLE-AGED FEMALES





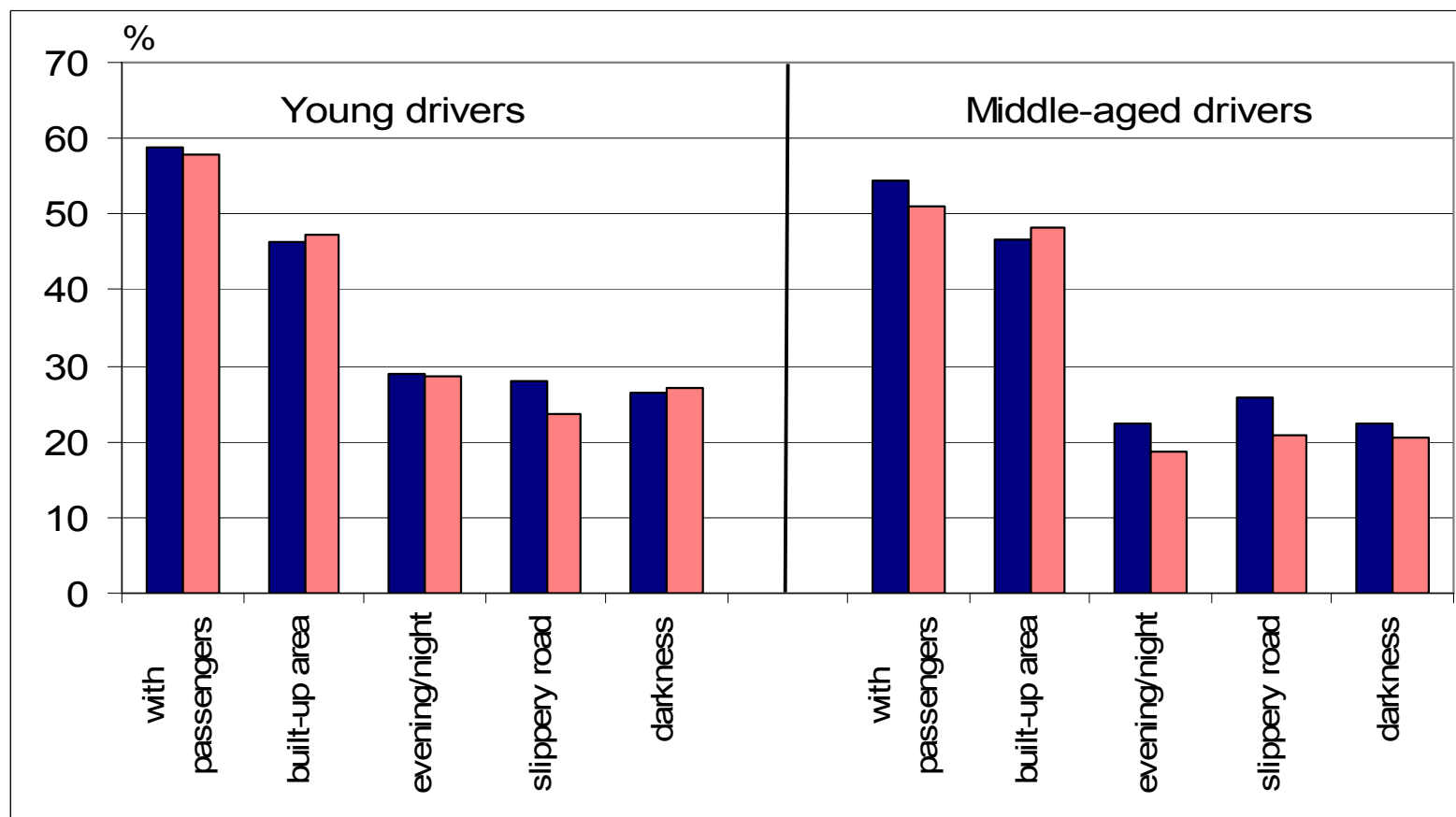
Purpose of a trip in self-reported accidents and in all driving





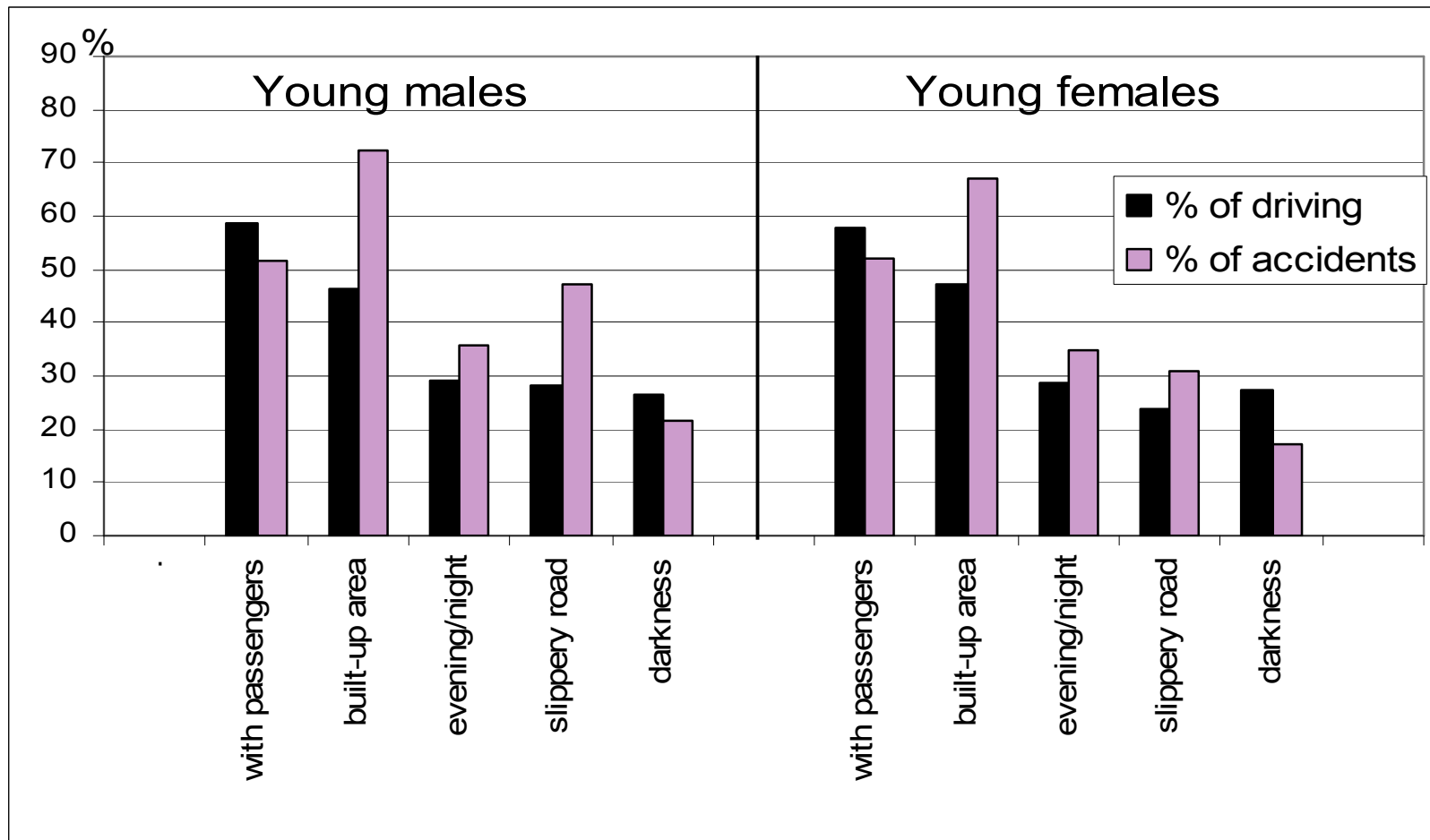
Self-reported driving circumstances

■ Males
■ Females



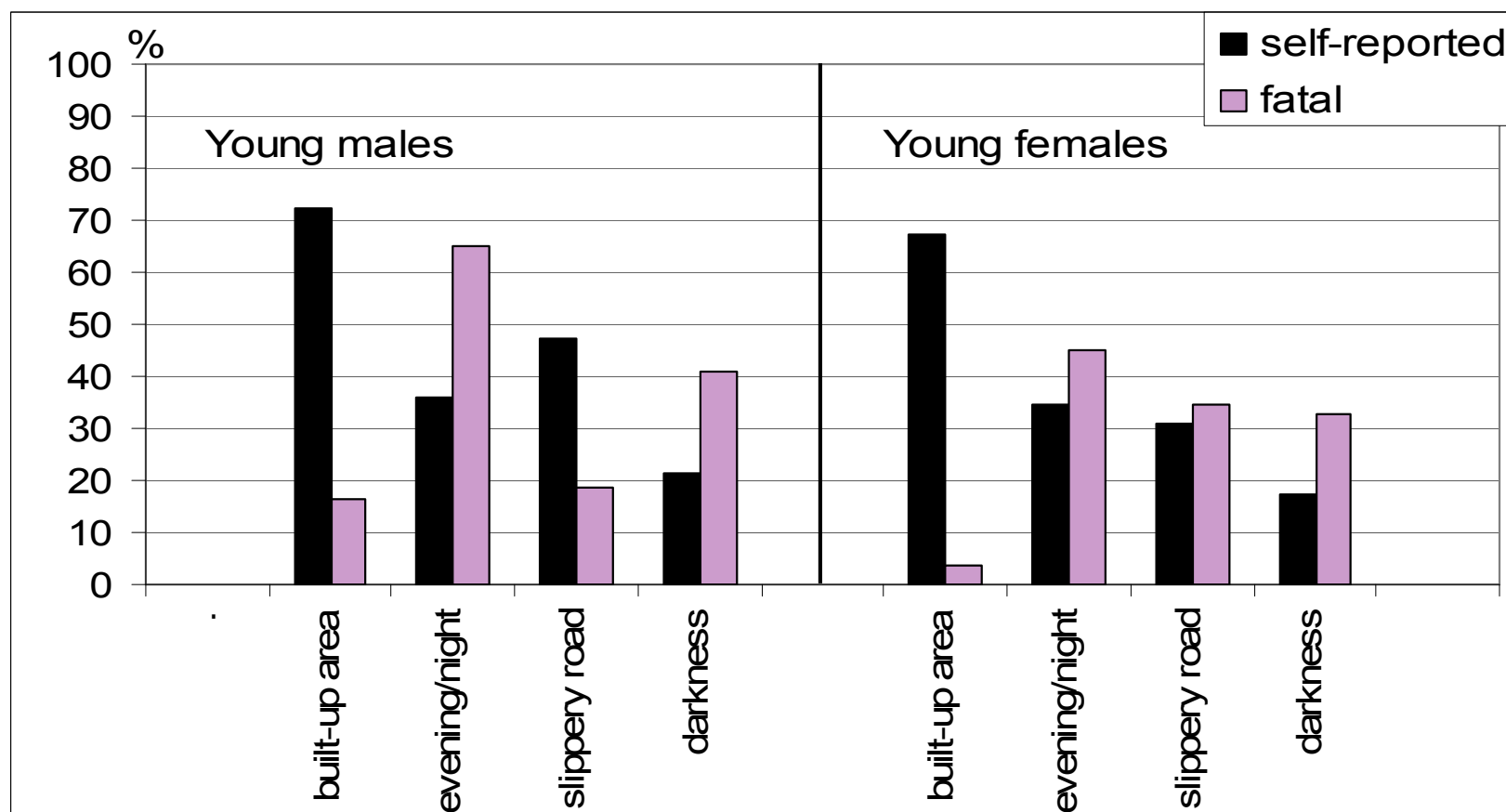


Driving circumstances in self-reported accidents and in all driving





Driving circumstances in self-reported and fatal accidents



Conclusions

- Motives for driving and driving circumstances vary between driver groups.
- Some driving circumstances seem to increase accident risk in all driver groups (built-up area, slippery road conditions).
- Some driving circumstances seem to increase accident risk among young drivers but not among middle-aged drivers (driving during evenings and at night).
- Some driving circumstances seem to increase accident risk for minor accidents but not for fatal accidents (built-up area, slippery road conditions for young males).

- Although some driving circumstances may increase the difficulty of the driving task, the most crucial factor effecting accident risk is the way of driving (self-induced risk).
- e.g. the risk of fatal MV accident in built-up areas is low, but a driver may increase the risk by speeding and not using seat-belt.
- When estimating MV accident risk it is important to specify what kind of accidents regarding severity are concerned!



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THANK YOU !