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Older drivers' self-regulation in traffic

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Background: Independent mobility is important for older adults

- The car is the safest and most convenient mode of transportation for most older adults (OECD, 2001)
- Driving cessation is mostly associated with negative consequences – particularly loss of mobility and independence (Rudman et al, 2006; Taylor & Tripodes, 2001)
- Independent mobility is important for older adults quality of life, functionality and ability to be active members of society (Avlund et al., 2004; Hakamies-Blomqvist, 2003; Farquhar, 1995)



Background: Independent mobility is important for older adults

- Research has found that many older women stop driving even though they are still fit to drive
(Kostyniuk & Molnar, 2008; Siren et al., 2004)
- For these reasons it is important to explore how to prevent premature driving cessation





Background: Self-regulation of driving

- Self-regulation is a strategy to continue to drive safely
(Donorfio et al., 2008) Or the beginning of the end of driving?
- Knowledge about self-regulation of driving may thus be useful to prevent premature driving cessation



Background: Self-regulation of driving

- Many studies have found that older drivers self-regulate their driving (e.g. Charlton et al. 2006; D'ambrosio et al., 2008; Molnar & Eby; 2008; Rimmö & Hakamies-Blomqvist, 2002)
- Self-regulation of driving is typically reduction of overall driving and avoidance of demanding driving situations





Background: Self-regulation of driving

- There is an association between cognitive decline and Self-regulation (e.g. Ross et al., 2009; Charlton et al., 2006)
- Gender, lack of driving experience, confidence, having been in an accident before etc. is also associated with Self-regulation (e.g. Kostyniuk & Molnar, 2008; Hakamies-Blomqvist & Wahlström, 1998; Charlton et al., 2006)
- There appears to be a vicious circle leading to premature driving cessation (lack of routine, lack of confidence, avoidance of traffic situations)



Purpose of this paper

- To explore reasons older drivers give for regulating their driving with focus on internal and external factors and gender trends in these.





Methods: The sample and research design

- Survey using structured phone interviews based on a questionnaire
- Random sample from Danish drivers license database
- Response rate approx. 70%
- Participants 888 drivers, 49.9% females, 51.1% males, aged 75 – 95, mean age 82.



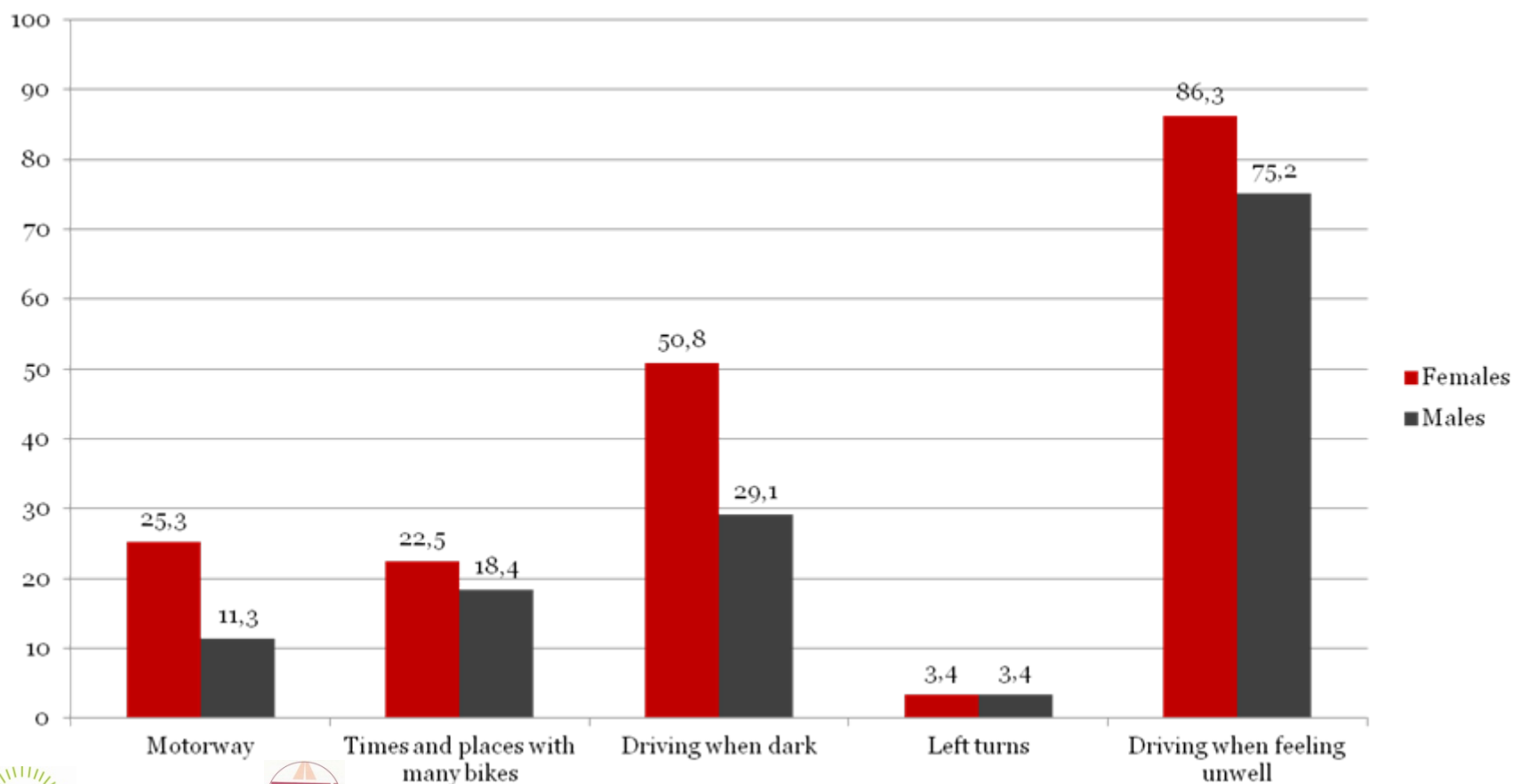
Results: focus in this presentation

- Avoidance of 5 selected traffic situations
- Reasons for avoidance of these traffic situations





Results: avoidance in five selected traffic situations





Results: Rating of reasons for self-regulation

- How well does “the reason” fit you?
- Five point Likert type scale: 1= “not at all”, 5 = “very well”
- Thus, a score above approx. 3.2 indicate that the reason has some relevance for the person.



Results: Reasons for avoiding driving on motorway

- “because I do not like to drive on motorway” (F:3.98, M:3.84)
- “because I do not feel confident in my own driving, when I drive in motorway”
- “because I have no reason to drive on motorway” (F:4.08, M:3.63)
- “because I prefer to drive another and prettier route” (F:3.81, M:3.85)
- “because the other drivers drive recklessly on the motorway”
- “because the speed is so high on the motorway” (F:3.60, M:3.78)
- “because I am scared of having an accident”
- “because I feel unsecure about driving on motorway”
- “because I previously have been in an accident”
- “because it takes too much concentration to drive on motorway”
- “because my vision has declined”
- “because my reaction time has declined”
- “because a member of my family/or other person thinks it is best if I avoid driving on motorway”



Results: reasons for avoiding driving times and places with many bikes

- “because I do not like to drive when there are many bikes” (3.51)
- “because I do not feel confident in my own driving, when I drive where there are many bikes”
- “because I have no reason to drive where there are many bikes” (3.57)
- “because the cyclists drive recklessly”
- “because I am scared of having an accident”
- “because I feel unsecure about driving when there are many bikes”
- “because I previously have been in an accident”
- “because it takes too much concentration to drive when there are many bikes”
- “because I have difficulties orienting because of stiffness of the neck”
- “because my vision has declined”
- “because my reaction time has declined”
- “because a member of my family/or other person thinks it is best if I avoid driving when there are many bikes”



Results: reasons for avoiding driving when it is dark

- “because I do not like to drive when it is dark” (F:4.16, M:3.83)
- “because I do not feel confident in my own driving, when I drive when it is dark”
- “because I have no reason to drive when it is dark” (F:3.96, M:3.71)
- “because I have good access to public transportation which I prefer to use when it is dark”
- “because I might as well move my activities to when it is light” (F:3.98, M:3.94)
- “because the roads I typically drive on have poor lightning”
- “because there are so many cyclists who drive without lights on”
- “because I am scared of having an accident”
- “because I feel unsecure about driving when it is dark” (3.42)
- “because I previously have been in an accident”
- “because it takes too much concentration to drive when it is dark”
- “because my vision has declined”
- “because my reaction time has declined”
- “because a member of my family/or other person thinks it is best if I avoid driving when it is dark”



Results: reasons to avoid driving when feeling unwell

- “because I do not like to drive when feeling unwell” (F:4.16, M:4.00)
- “because I do not feel confident in my own driving, when I am feeling unwell”
- “because I have no reason to drive when feeling unwell” (F:4.10, M:3.87)
- “because I am scared of having an accident”
- “because I feel unsecure about driving when feeling unwell” (F:3.45, M:3.38)
- “because I previously have been in an accident”
- “because it takes too much concentration to drive when feeling unwell”
- “because it is difficult to keep the overview in traffic when feeling unwell”
- “because a member of my family/or other person thinks it is best if I avoid driving when feeling unwell”



Discussion

- “I do not like to drive in this situation” and “I have no reason to drive in this situation” most relevant reasons
- Is the feeling of “not liking” caused by lack of confidence?, functional decline? the behaviour of other road users? something else?
- Maybe different factors cause this feeling in men and women



Conclusion

- The results indicate that the feeling of “not liking” to drive in a situation leads to avoidance of the situation if possible.
- It is not possible to conclude if this feeling stems from internal or external factors.
- The feeling of “not liking” to drive in certain situations may be central to the vicious circle leading to premature driving cessation and thus worthy of further study.