

Safety Perception: The Relationship between Age and Driving Environments

Introduction

Drivers evaluate the relative safety of a driving situation differently, depending on their age, experience or environment.

Rural and Urban Driving Environments

- The appearance of a less complex driving environment in rural setting lead to the perception of fewer traffic hazards enabling drivers to adopt inappropriate and maladaptive strategies (Crundall & Underwood, 1998).
- On the contrary, urban environments are perceived as more complex and are typically travelled at lower speed limits, and hence driving violations occur at a higher rate (Rakauskas, Ward, & Gerberich, 2009).

Effects of Driver Age and Experience

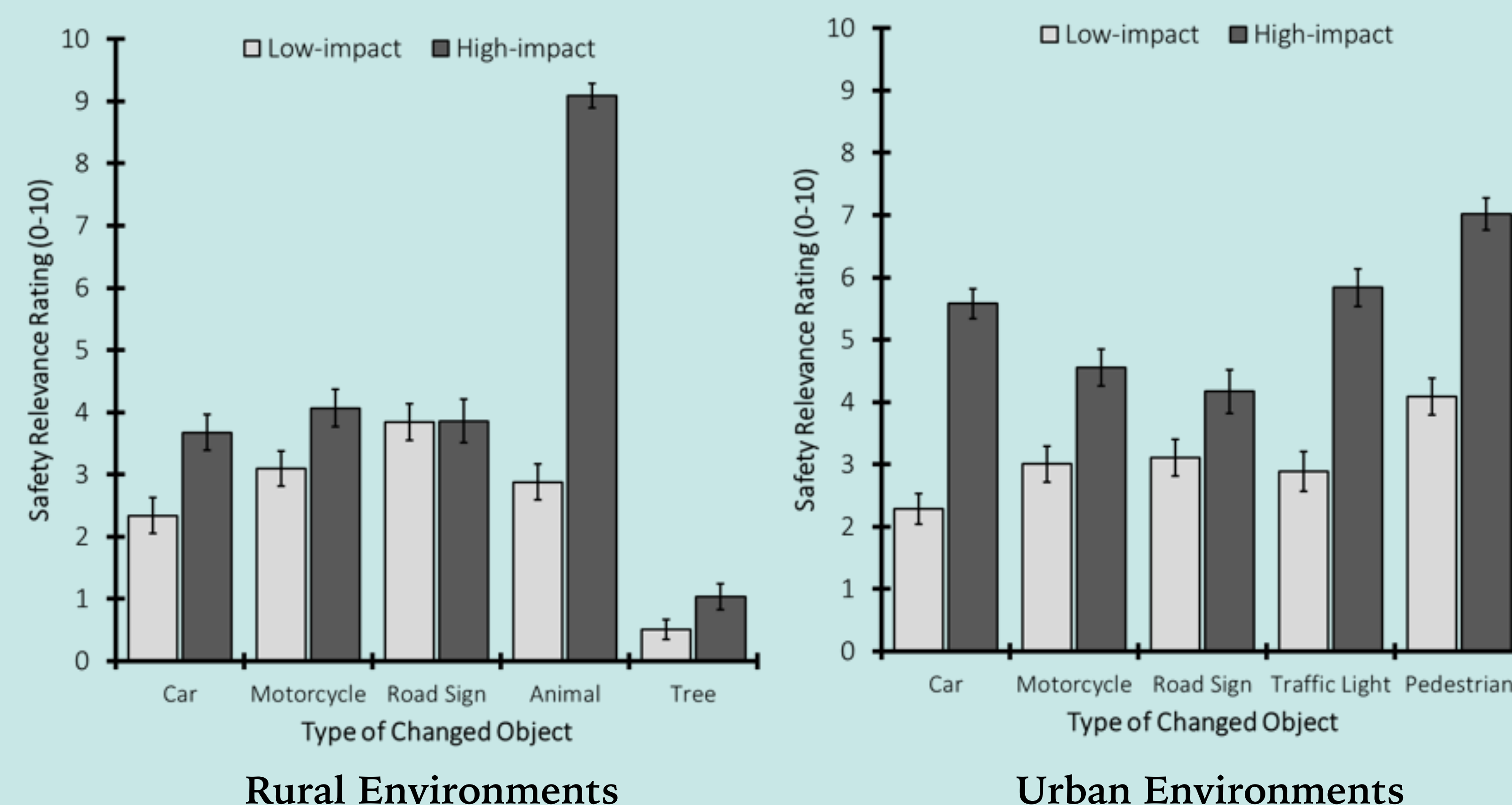
- Novice drivers are faced with the “Young Driver Problem”, exhibiting poor driving skills and behaviours when first licensed, but this improves over time (Williams, 2003).
- Experienced drivers were found to practice safer driving behaviours and have better hazard perception ability (Underwood et al., 2005).
- Older drivers adopt self-regulation strategies, such as slower driving and avoidance of certain traffic conditions (Charlton et al., 2006).

Given that prior research found significant differences in driving attitudes and behaviours due to driving environment and experience, the aim of the study is to explore safety perceptions in drivers across age in rural and urban driving environments.

Results

A significant difference was found between rural and urban driving environments ($p < .001$). Changes in urban environments were rated as having higher safety relevance ($M = 4.3$, $SE = 0.3$) when compared with changes in rural environments ($M = 3.5$, $SE = 0.2$). However, driver categories did not have an influence on safety relevance of driving environments ($p = .949$).

Safety ratings by change type across driving environments and safety impact also demonstrated significant differences in safety rating scores.



Methods

64 licensed drivers (22 young novice drivers aged 18-24 years; 21 experienced drivers aged 25-40 years; 21 older experienced drivers aged 55-70 years) rated the safety relevance of key elements (e.g. trees, animals, cars, traffic lights) in urban and rural driving environments (using an 11-point slider scale (0= *not at all safety relevant*; 10= *highly safety relevant*)).

Participants also provided data on their driving behaviour, attitudes and risk perception more generally. Examples of stimuli from safety rating task:



0 ————— “Please rate the safety relevance for this change” ————— 10

Conclusion

- In general, the study found evidence that safety perceptions differ in rural and urban driving environments. Additionally, we found that different conditions (e.g. change in traffic signs, presence of animals) do elicit different perceptions of safety.
- Our hypothesis that driver categories will influence safety perceptions was not supported
- Findings from studies investigating driver safety have practical implications for road safety (e.g. road policies and education for novice and older drivers. Specifically, this study, along with previous studies on driver perception, suggests the need for driver education on hazard detection in efforts to promote road safety.

References

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