Young drivers' perception of adult and child pedestrians in potential street-crossing situations - DTU Orbit (03/11/2019)

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Despite overall improvements in road traffic safety, pedestrian accidents continue to be a serious public health problem. Due to lack of experience, limited cognitive and motoric skills, and smaller size, children have a higher injury risk as pedestrians than adults. To what extent drivers adjust their driving behaviour to children's higher vulnerability is largely unknown. To determine whether young male drivers' behaviour and scanning pattern differs when approaching a child and an adult pedestrian in a potential street-crossing situation, sixty-five young (18-24) male drivers' speed, lateral position and eye movements were recorded in a driving simulator. Results showed that fewer drivers responded by slowing down and that drivers had a higher driving speed when approaching a child pedestrian, although the time of the first fixation on both types of pedestrians was the same. However, drivers drove farther away from a child than an adult pedestrian. Additionally, fewer drivers who did not slow down fixated on the speedometer while approaching the child pedestrian. The results show that young drivers behave differently when approaching a child and an adult pedestrian, though not in a way that appropriately accounts for the limitations of a child pedestrian. A better understanding of how drivers respond to different types of pedestrians and why could contribute to the development of pedestrian detection and emergency braking systems.

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