

0411 DEVELOPMENTAL DIFFERENCES IN PEDESTRIAN VISUAL SEARCH PATTERNS

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Measuring attention to traffic is common in pedestrian safety studies. However, little is known of how visual search patterns affect safe crossing decisions or to what pedestrians are actually attending. Our work has two aims: (1) examining visual search patterns in both commercial and residential settings and (2) exploring developmental differences in pedestrian visual search tasks by comparing children ages 5–9 to adults. 22 adults ages 19 and older have participated, with another 30 adult participants scheduled. Data from 40 children ages 5–9 will be collected prior to June 2010. Participants view paired images of pedestrian settings in a series of trials in a change-blindness task. Each whole image is paired with an altered image containing pedestrian safety-relevant and irrelevant

differences. Participants attempt to locate differences over a 2-min period. Time and frequency of attending to safety-relevant and irrelevant areas in each task are recorded by a desk-mounted eye tracking system.

Significant effects are already emerging. Adults location of relevant safety stimuli is more effortful and their visual search is less efficient when presented with a commercial image (ie, more cars, signs and signals adding visual clutter). Strong developmental effects also are expected; children will be less efficient and more distracted by visual clutter in the pedestrian environment.

Results will extend knowledge in two ways. First they will highlight the importance of children's developing visual search skills for pedestrian safety. Second, results will expand knowledge of how all pedestrians process complex visual stimuli in pedestrian settings.