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Title: FEAR AND DANGER APPRAISALS OF A ROAD CROSSING SCENARIO: A DEVELOPMENTAL PERSPECTIVE

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Abstract:

One of the most important cognitive tasks performed by pedestrians is visual timing, i.e. evaluating of a vehicle time-on-arrival, comparing it with one's own crossing time, resulting in the decision whether to cross or not (Thomson, Tolmie, Foot, & McLaren, 1996). Children's actual performance of this task is possibly deficient, due to their relatively inferior visual, motor and physical skills, resulting in an overreliance on the distance factor, and road-crossing training programs focusing on the speed, distance and time elements result in questionable improvement in performance. Children's safe-crossing programs usually rely on verbally focusing children on these elements, tapping their conceptual aspects rather than the actual perceived stimuli. Such programs frequently utilize fear of the danger associated with traffic accident, causing children to avoid inappropriate crossing behavior. Although findings indicate that when children are made aware of the danger of traffic accidents, they identify and fear the situational danger, they apparently do not view traffic accidents as eminent, probable dangers and therefore neither worry about them nor take any preemptive measures to avoid them (Demetre and Gaffin, 1994; Hill et al., 2000). Thus, for a children's safe crossing program to become effective, it need both to improve children's detection of visual timing factors, and then to make them identify the risks these factors present.

In view of possible gaps between knowledge and its actual implementation (Miller, Austin, and Rohn, 2004), the current study avoided direct evaluations of speed and distance (and naturally, direct risks), instead focusing on conceptual, rather than perceptual, examination of the visual timing elements of distance and speed, as integrated into appraisals of risks related to a traffic scenario. Preschool children, 3rd grade children and adults appraised pedestrian fear and danger associated with four scenarios conceptually depicted using a table-top model. Each scenario described either a child or an adult pedestrian approached by a vehicle at in various distances (near/far) and speeds (slow/fast). Results indicated preschoolers conceptualized speed to be the primary risk factor compared to distance, and with a more pronounced deficiency for danger appraisals. They provided similar ratings for child and adult pedestrians indicating a failure to realize children's underprivileged pedestrian status. Third graders conceptualized both speed and distance as risk factors, yet usually relied on the more salient factor, yet failing to integrate both concepts in their appraisals. Like preschoolers, third-graders also failed to differentiate between the risks posed to children compared to adults. Adult subjects integrated the danger and fear appraisals by giving separate weights to both distance and speed concepts.

These finding suggest that increasing the amount of traffic safety information available to the children may not be enough to improve their safety. Even if the risk factors were to be pointed out by the adults, children's risks assessment may still be inadequate. Furthermore, as children seem to be oblivious to their higher-risk levels, further emphasis is needed to dissuade parents from over reliance on their children's skills of handling even trivial traffic situations. Possibly, training methods combining knowledge components with emotional components (such as

arousing the negative affects of fear and danger) might yield more effective results.