Child Road Safety: Developmental and Psychological Perspectives

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Overview

- Cognitive Developmental Theories
- Early learning
- Fundamentals of pedestrian safety
- Learning by example
- Conclusions
Cognitive Development Theories
Describe the construction of thought processes including learning, problem solving and decision making

- Behaviourist/Activity Theories
  Learning by interacting with the environment

- Social Cognition
  Learning through observation

- Zone of Proximal Development
  Learning and achieving more with support

- Moral Development Theory
  Right or Wrong, It Depends
Early cognitive development
One toddler’s mental representations of how to behave in the car

Worry about yourself – I can do this – you drive!
Children are vulnerable as road users

Road Casualties Killed and Seriously Injured Children Aged 0 – 14-years 1997 – 2012 (RSA)

- Car Passengers: 42%
- Pedestrians: 41%
- Pedal Cyclists: 11%
- Others: 6%

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Fundamental skills for pedestrian safety

Pedestrians require a range of fundamental skills in order to interact safely with traffic and they must also learn to use these skills strategically at the roadside.

- Know and identify a safe place to cross
- Detect the presence of traffic
- Co-ordinate perceptions and actions
Teaching children to cross the road using The Safe Cross Code
Know and identify a safe place to cross

Children’s street crossing preferences (Thompson, 1993)

The arrows show examples of the routes children constructed from (1) Very unsafe; (2) Unsafe; (3) More Safe; (4) Safe
Co-ordinating perceptions and actions

Minding the Gap

Mean safe distance gaps observed in children

Gap in metres

<table>
<thead>
<tr>
<th>Gap in metres</th>
<th>5-6 years</th>
<th>8-9 years</th>
<th>11-12 years</th>
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</table>
| 0             | Boys      | Girls     | (Adapted from Connelly et al, 1998)
Hazard/Risk Perception

The creation of accurate expectations about what can happen in dangerous situations based on current perceptual evidence (Groeger & Chapman, 1996)

Risk awareness develops in 4 stages (Limbourg, 1997; 2008)

1. Immediate risk awareness (acute) (around 5-years-old)
2. Anticipation risk awareness (around 8-years-old)
3. Preventive risk awareness (around 10-years-old)
4. Reduced risk awareness (around 11-12 years)

Limbourg also cautions that these age categories provide only rough guidelines and that risk awareness depends largely on the child’s experience.
Leading by example

US study of safety role modelling among parents and children

Observations of road crossing behaviour of parents and other adult caregivers who were accompanied by one or more children

![Bar chart showing percentage observed in different road crossing scenarios.](chart.png)
Conclusions
Thank You
References


