The Influence of Interpersonal Synchrony on Helping Behavior, Social Bonding, and Empathy in Children
Mykaela Holt & Dr. Tara Vongpaisal, MacEwan University

Introduction

Background:
Previous studies have shown that prosocial behaviors can be increased through interpersonal synchrony (Cirelli, 2018). This effect can be seen in both large- and small-scale movements, with children experiencing greater preferences for those who synchronize with them (Cirelli, 2018).

Prosocial Behavior:
- Acting in ways that benefit others (Deschamps, Been, & Matthys, 2014)
- This includes:
  - Volunteering
  - Cooperating with others
  - Spontaneous helping
  - Sharing

Interpersonal synchrony:
- Two or more people moving in time with one another (Cirelli, 2018)

- Large scale movements:
  - Marching
  - Dancing
  - Singing/Chanting

- Small scale movements:
  - Tapping
  - Clapping
  - Bouncing

Purpose: The influence of interpersonal synchrony on children’s empathy and helping behavior will be explored in typically developing children ages 3-12 years. We will also examine how the age of peer playmates affect these outcomes.

Methods

FISH FEEDING TASK: (Kirschen & Tomasello, 2010)
- Children are instructed to fill fish tubes with fish food
- One child’s fish food is spilt on the way to a fish tank, creating an opportunity for the other child to engage in spontaneous helping behavior

CLAPPING GAME: (Tunçgenç & Cohen, 2018)
- Children will clap and tap to metronome sounds either in- or out-of synchrony.
- Eye-contact and the number of shared and mutual smiles will be used to measure social bonding

EMPATHY RATING TASK: (Tunçgenç & Cohen, 2018)
- Children will respond to questions using a 7-point Likert scale.
- Two components of empathy will be examined:
  - Cognitive empathy
  - Affective empathy

PARTICIPANTS: Typically developing 3-12 year old children will be recruited from MacEwan’s childcare center. 40 children will be paired with an adult experimenter and further divided in 2 age groups: 20 younger children and 20 older children. 40 younger children will be recruited in the peer interaction condition.

Expected Results

- Synchronous Condition
  - Helping Behaviour: 
  - Cognitive Empathy: 
  - Affective Empathy: 
  - Social Bonding: 
    - Eye-Contact
    - Mutual Smiles
    - Individual Smiles

- Asynchronous Condition
  - Helping Behaviour: 
  - Cognitive Empathy: 
  - Affective Empathy: 
  - Social Bonding: 

Furthermore, we expect children will display greater empathy and helping towards same age peers than towards older age peers.

Helping Behaviour

- Pre-Synchronization
- Adult Synchronization
- Child Synchronization

Social Bonding Measures

- Pre-Synchronization
- Adult Synchronization
- Child Synchronization

Conclusions

The findings of this study may have implications for children with autism spectrum disorders, who show impairments in:
- Social communication
- Social relationships
- Social understanding and imagination (Fitzpatrick, 2017)

Training methods that improve inter-personal synchrony may enhance their social connections and prosocial abilities.