Investigating the Impact of Preschool Type on Young Children's Empathy

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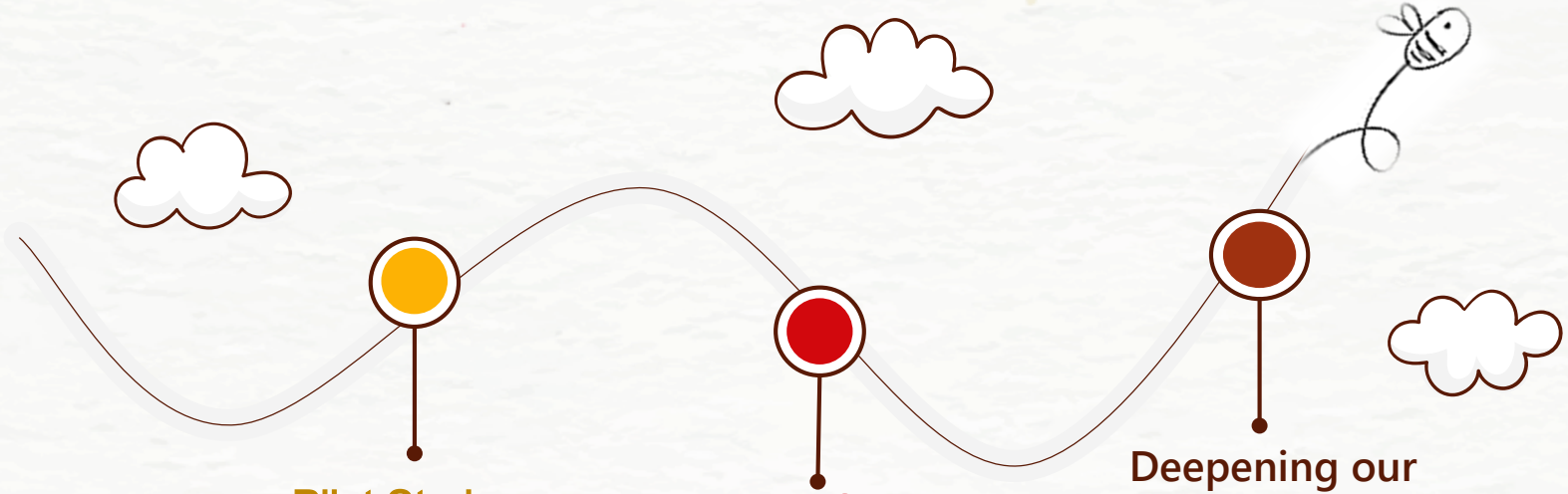
Acknowledgements

Photo credits throughout these slides: Secret Forest Playschool, Hartley Nature Preschool, Lake Superior Zoo, Wind Ridge School House, Little Barnyard Preschool

ADVANCING CONSERVATION THROUGH **EMPATHY FOR WILDLIFE**

LAKE SUPERIOR ZOO

Context:
Young Children's Empathy Research Trajectory



Pilot Study

-Determining assessment measures

-Evaluation of empathy development in Zoo preschool participants

Impact Study

-Comparing Empathy Development (Zoo/Farm Preschools v. Nature Preschools v. Traditional)

Deepening our Understandings

-Influences on Young Children's Empathy

-Deepening Strategies with Indigenous Perspectives

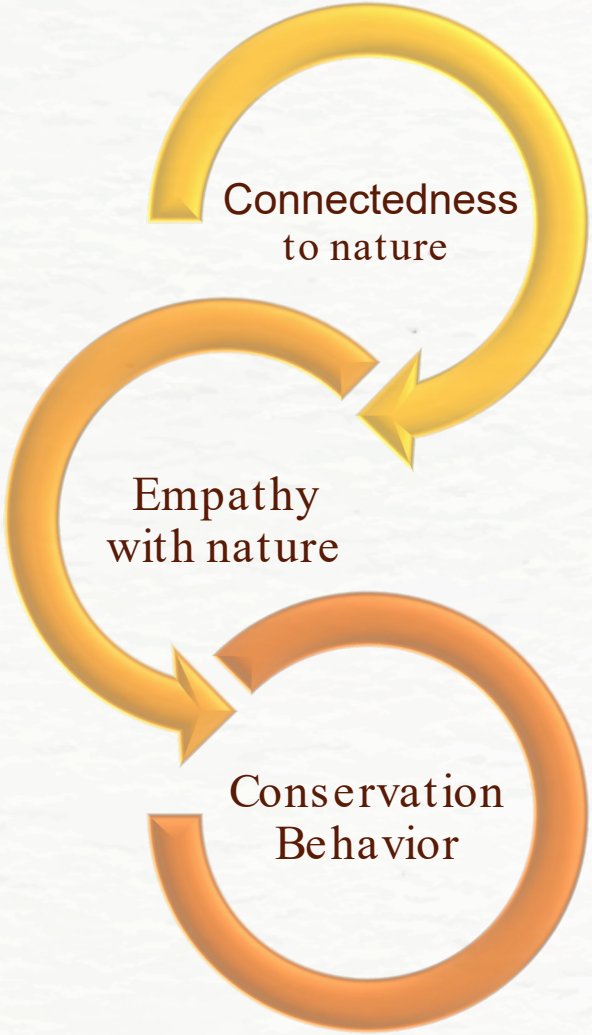
Stepping Back:
Why Empathy?

Conservation Behavior

Empathy with animals (Sevillano et al, 2007)

Empathy with other living things and nature (Berenguer, 2007)

Intention to protect nature, biospheric concern, and environmental behavior (Tam, 2013, Berenguer, 2007)


Connectedness
to nature
Empathy
with nature
Conservation
Behavior

Empathy and Pro-Social Behavior

- A key driving factor of prosocial behavior
- Partially mediates the relationship between childhood prosocial behavior and dispositions for prosocial behavior as adults
- Related to ones openness and willingness to see injustices and to one's valuing of others' welfare and wellbeing

..the basis for human cooperation
(de Waal, 2010)

“the spark of human concern for others , the glue that makes social life possible”
(Hoffman 2000)

Empathy with **future generations** (Pahl & Bauer, 2013)

Solidarity with one another, other species, and the life-supporting biosphere toward a **global consciousness** (Riftkin, 2009)

Acknowledging "otherness" and **transcending differences** across social and spatial boundaries (Schultz, 2000)

Empathy with those similar or close to you

Stepping Back:
Why Nature Preschool?


NICK

Effective Strategies to Increase Empathy

- Are developmentally-responsive
- Embed empathy within social and emotional learning
- Provide repeated opportunities to practice within the program-structure and beyond to real-life

Affordance Theory: natural elements and settings have responsive affordances that immediately show consequences of children's actions

Attention Restoration Theory: capacity for attention recovers in restorative environments

"If you can find nature, engage with it and get your heart rate down, then your mind begins to settle. When your mind isn't ruminating, it can then open to a wider world, where there's great beauty and healing."

Peter Kahn, University of Washington

Study Purpose, Participants, Design

Purpose: Investigate the influence of preschool type on empathy with humans, animals, and wildlife

Research question: When controlling for pretest levels, age, gender, and dosage of preschool participation, do posttest levels of cognitive and affective empathy and empathic behavioral intentions differ by preschool type?

Treatment groups

- Two **Animal-Focused Nature** Preschools (n = 38)
- Three Nature Preschools (n = 49)

Control group

- Three **Non-Nature** Preschools (n = 37)

Quasi-Experimental Design

(Pretest-Posttest Nonequivalent Control Group)

Construct Measured

- **Cognitive:** the ability to understand what another is feeling
- **Affective:**
  - Emotional sharing: sharing the feelings of another
  - Motivational: feeling concerned for another

Empathic Behavioral Intentions

Behavioral (Responsive, Caring Behaviors)

Research Instrument

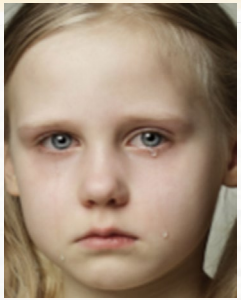
Modified Version of the Young Children's Empathy Measure with Humans and Animals

(Poresky, 1980)

- 12 vignettes with accompanying photos and assessed in three contexts (people, non-wildlife animals, and wildlife)

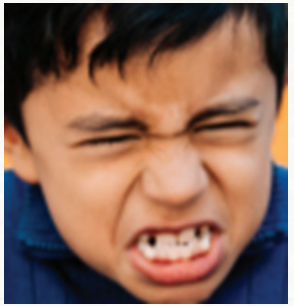
Example: Empathy with PEOPLE

This child gets to go their favorite playground. There are a lot of fun slides, swings, and things to play on that this child really likes.



This child has a special blanket they like very much and sleep with it every night. At bedtime, the child is looking for it and can't find it anywhere.

It is nighttime. This child was sleeping but wakes up because they hear very loud cracks of thunder and then they sees bright flashes of lighting



This child got a new toy for their birthday that they like to play with very much. While this child was playing with their new toy, another child came up and took it right out of their hands without asking and broke it.

For each vignette: *"How does this child feel?", "How do you feel about this child who…?" "What would you do or say to this child who..?"*

(photo credit: available upon request; not meant for distribution)

Data Collection and Analysis

- IRB approval, parental consent obtained
- Pretests in Fall, Posttests in Spring at the 8 sites
- Data on age, gender, “dosage”
- Scoring

  3=response that is an emotion relevant to vignette AND photo

  2=response relevant to vignette or photo

  1=emotional response not relevant to vignette or photo

  0=non-emotional response

- Scoring by two researchers; discussed discrepancies
- Yielded 9 pretest and posttest scores per child (cognitive, affective, and behavioral intention for empathy with people, non-wildlife animals, and wildlife)

Results

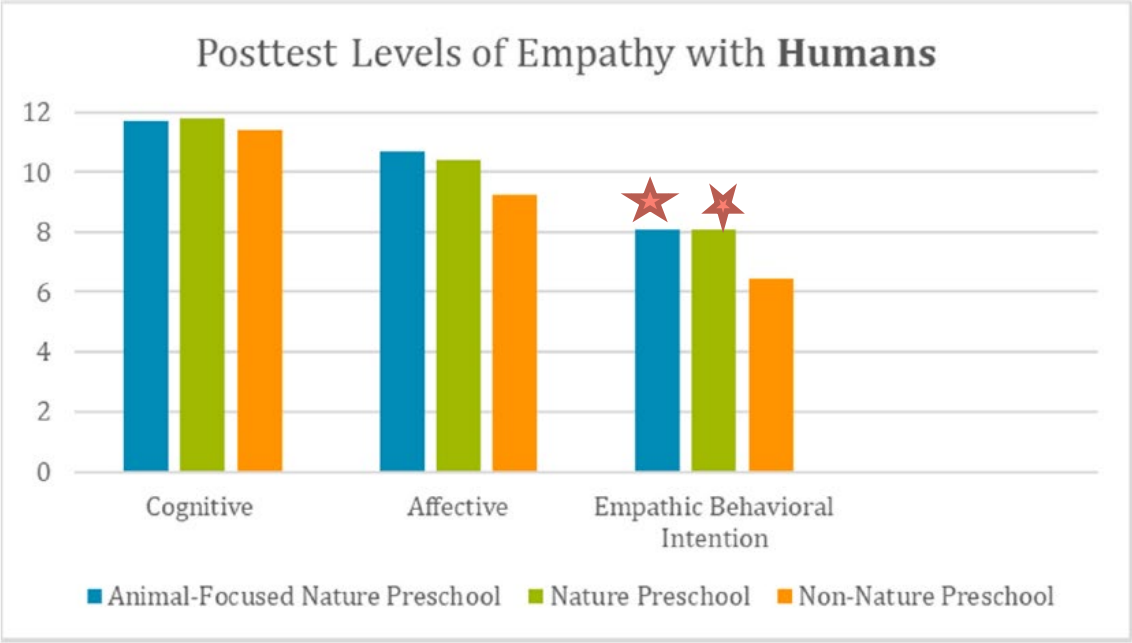


Figure 1. Comparison of estimated posttest marginal means by preschool type for empathy with humans, when controlling for pretest means, age, gender, and dosage of participation.

Results

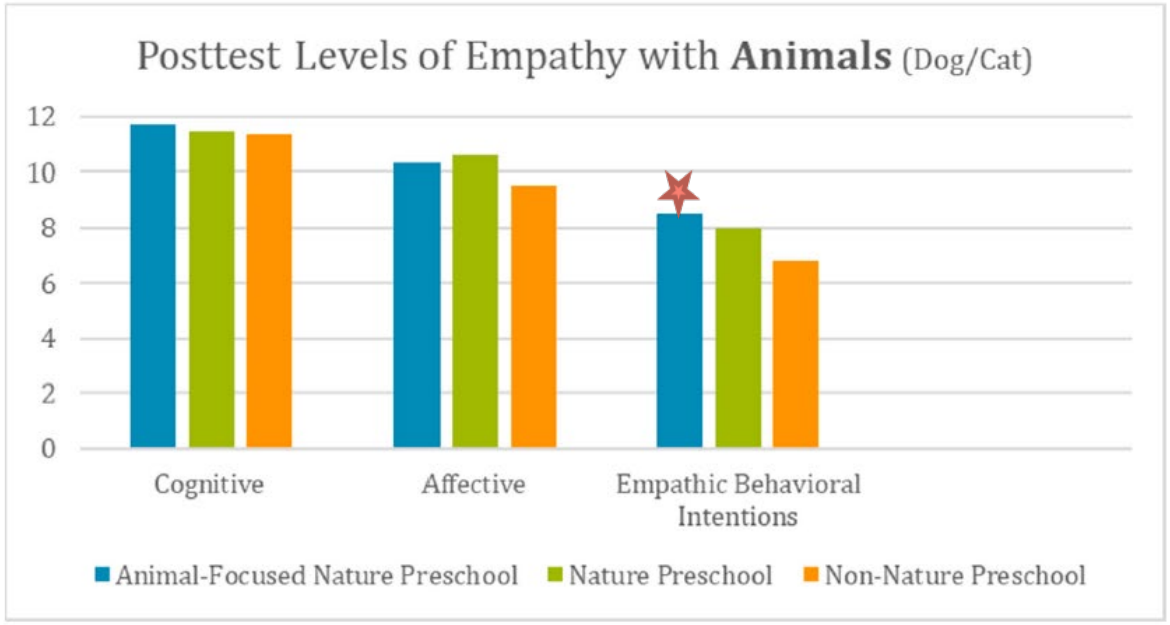


Figure 2. Comparison of estimated posttest marginal means by preschool type for empathy with animals, when controlling for pretest means, age, gender, and dosage of participation.

Results

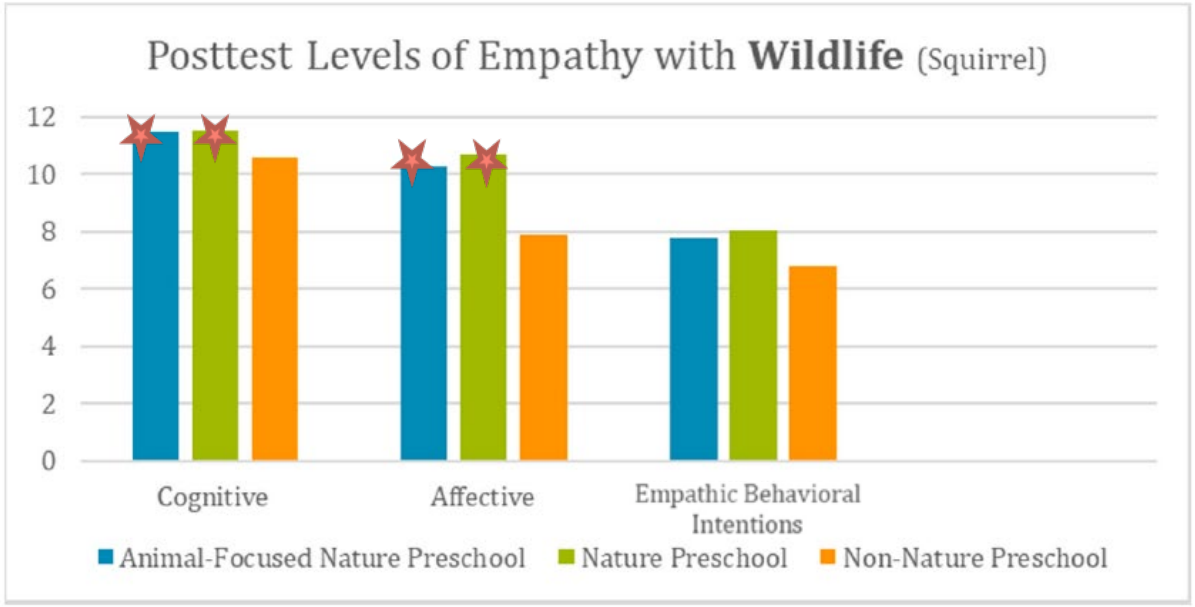


Figure 3. Comparison of estimated posttest marginal means by preschool type for empathy with wildlife, when controlling for pretest means, age, gender, and dosage of participation.

Noteworthy Findings

- Animal and nature preschools supported empathic behavioral intentions toward others beyond what would be expected

- Animal-focused and nature preschools effective in supporting cognitive and affective empathy with wildlife

- Relationship between childhood prosocial behaviors and **adulthood dispositions for prosocial behavior**
- Empathy with wildlife may activate **empathy with nature** toward **conservation behaviors**
- Affective empathy is typically a relatively stable construct

Further Discussion/Research

- Influential characteristics of nature preschool/nature play
- Durability and transferability of findings
- On the research instrument
    - Affective empathy – feeling with and feeling for
    - Empathic behavioral intentions toward wildlife – too abstract?
    - Didn't capture nuanced differences in responses ('make v. buy' a toy; use of visual cues to guide identification of emotion

Stepping Back:

Parallels from the Nature Contact and Human Health Research Agenda (Frumkin et al., 2017)

Mechanisms that account for effects	• Toward designing and testing strategies for delivering beneficial nature contact
Exposure Science	• Toward defining and measuring nature contact • More accurate and precise metrics combined with understanding of mechanisms can guide dose
Diversity and Equity	• Toward designing effective strategies that improve health and well-being for all
Implementation Science	• Toward translating what works into practice; moving evidence-based strategies into routine use

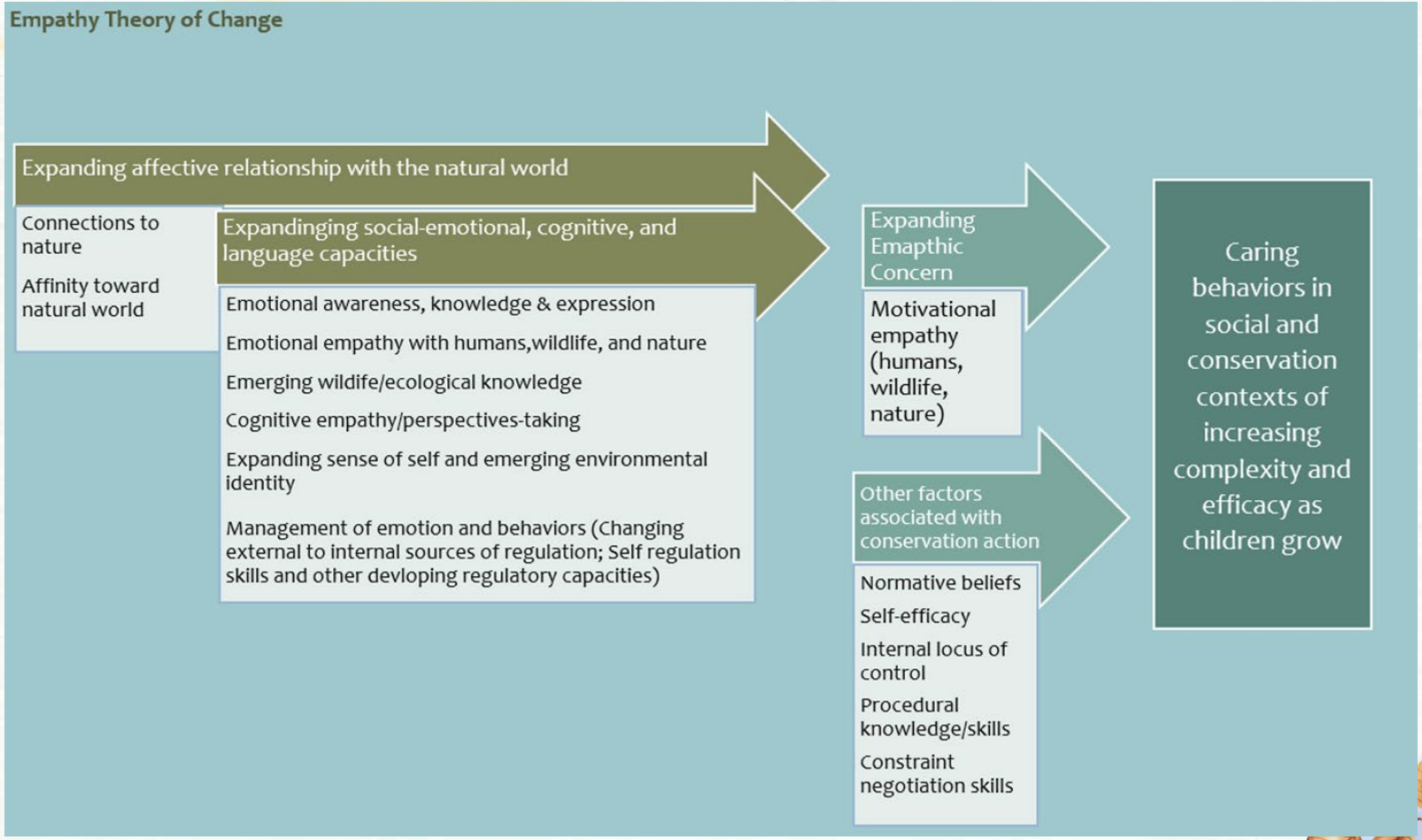
Stepping Back Further:

For whom and in which context? (Moore and Evans, 2017)

- Mechanismsof change are always contingent on context; what "works"in one time and place may be ineffective elsewhere
- Problematic to specify mechanisms linking actions to outcomes without paying attention to how those mechanisms function across time and space.

- Emerging methodological work calls for researchers to attend more closely to issues of context and view of interventions as disruptions to complex systems .
    - Interventions are attempts to disrupt mechanisms that perpetuate and sustain a problem in a given time and place, and thus can't be described or understood in isolation from the systems whose functioning they attempt to change.

Empathy and the Complexity of Human Behavior




Questions?