Science in Head Start Classrooms: Investigating Teachers' Attitudes and Beliefs and Classroom Practice

Elica B. Sharifnia, Ph.D.

Postdoctoral Research Fellow, Marsico Institute for Early Learning at the University of Denver

UNIVERSITY OF MIAMI
DEPARTMENT of PSYCHOLOGY

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Research Questions

1. What are preschool teachers' attitudes and beliefs towards science for young children?
2. How often do preschool teachers report engaging in science instruction in their classroom?
3. What is the relationship between teachers' attitudes and beliefs toward science and frequency of science instruction?

Method

Sample:

- 30 Lead Teachers from 6 Head Start Centers
- 100% Female; 60% White, 30% Black/AA, 87% Non-Hispanic
- 77% had at least a Bachelor's Degree

Measures:

Teacher Attitudes and Beliefs

- Preschool Teachers' Attitudes and Beliefs Towards Science survey (P-TABS)[1]
- Rate 35 items on a Likert scale from strongly disagree to strongly agree
- 3 scales:
  - *Teacher Comfort* - comfort with science in ECE
  - *Child Benefit* – perceptions about science being beneficial for young children
  - *Challenges* - challenges associated with science teaching in ECE

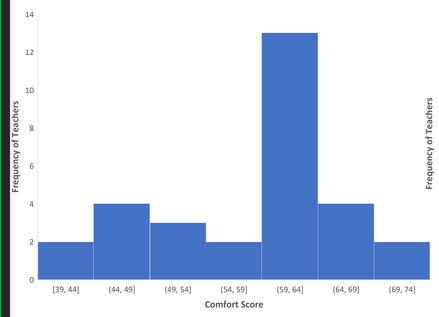
Frequency of Science Instruction

- "In this classroom, how often do you interact together with children on science activities?"[2]

[1]Maier, Greenfield & Bulotsky-Shearer, 2013; [2]Gerde et al, 2018

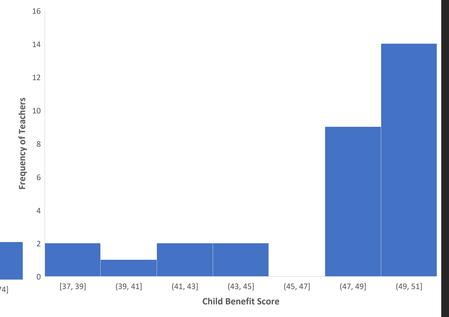
Results

Teacher Comfort



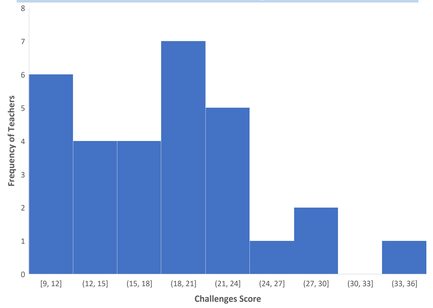
Teachers varied in their comfort with planning and guiding science experiences with young children

Child Benefit



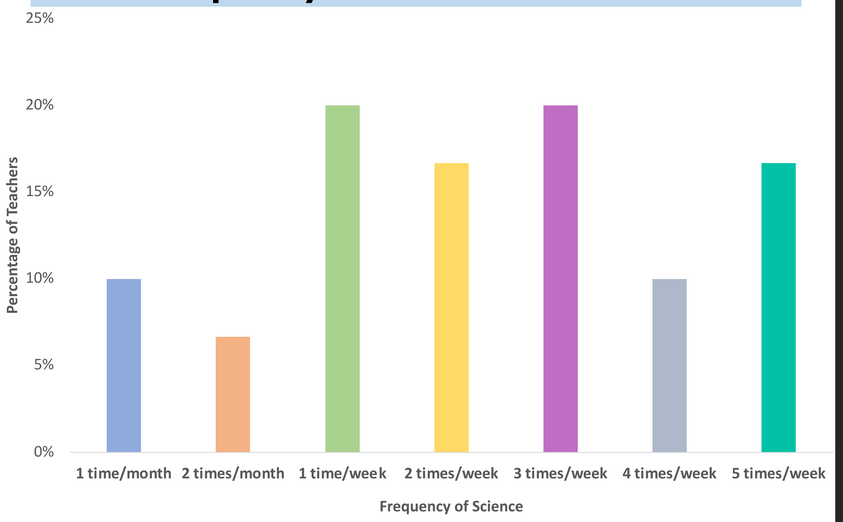
Majority of teachers found science to be beneficial for young children

Challenges



Teachers varied in their perceptions of the challenges with science teaching in ECE

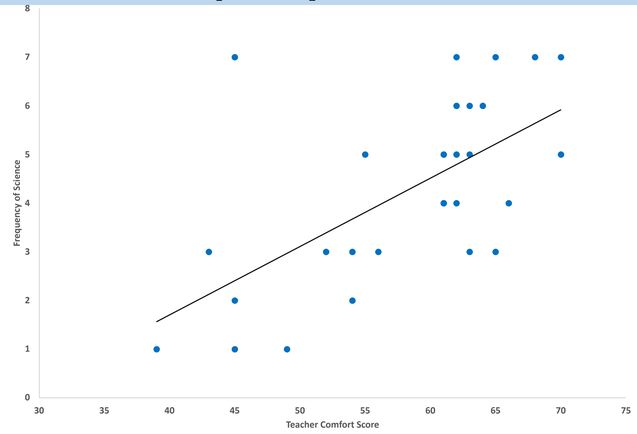
Frequency of Science Instruction



Teachers varied in their report of the frequency in which they engage in science in their classroom

Results (continued)

Relationship between Teachers' Attitudes and Beliefs and Frequency of Science Instruction



- Significant relationship found between Teacher Comfort and their report of the frequency in which they engage in science instruction in their classroom (graph above).
- No relationship was found between Child Benefit and Challenges and the frequency of science

Summary of Findings

- Teachers who are more comfortable planning and guiding science experiences with young children engage in science more frequently
- Teachers' beliefs that science is beneficial for young children, or their perception of the challenges related to science teaching does not affect the frequency of their provision of science experiences
- Providing professional development and resources that specifically aim to build *teacher confidence* in supporting science experiences in their classroom may promote more frequent science experiences in the classroom

QUESTIONS? COMMENTS? CONNECT WITH ME!

elica.sharifnia@du.edu

@ebsharifnia