Young Children’s STEM Interest and Relationships with Characters
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**Introduction**
- Interest in science, technology, engineering, and mathematics (STEM) activities during early childhood may be a factor contributing to the lack of diversity in STEM fields.1, 2
- Children develop interests and stereotypes about STEM and sex-typed roles through social cognitive learning from adults, peers, and media characters.3
- Relationships with media characters may impact young children’s interest in and learning STEM concepts from educational media.4, 5
- It was hypothesized there would be gender differences in children’s interest in STEM, and how much they identified with male or female characters and viewed those characters as STEM experts.

**Participants**
- 53 Children
  - Gender: 45.3% Female, 54.7% Male
  - Age: 3.76- to 6.94-years-old (M = 5.394, SD = .896)
  - Race: 52.8% European American, 9.4% African American, 24.5% marked multiple races, and 3.8% declined to answer
  - Ethnicity: 56.6% Latino, 43.4% non-Latino

**Procedure**
- Participants reported their identification with and expertise judgments of popular media characters.
- Participants rated their interest in STEM activities.
- Analyses evaluated gender differences in children’s STEM interest, as well as their identification with and expertise judgments of characters.

**Character identification ratings: Participant gender by character gender interaction**
- There was a significant participant by character gender interaction:
  - $F(1, 50) = 21.48$, $p < .001$, $\eta^2 = .224$
  - Boys had significantly greater identification with male than female characters
  - Girls had significantly greater identification with female than male characters

**STEM expertise judgments: Participant gender by character gender interaction**
- There was a significant participant by character gender interaction:
  - $F(1, 50) = 7.33$, $p < .01$, $\eta^2 = .132$
  - Boys rated male characters as greater STEM experts than female characters.
  - Girls did not rate expertise of characters significantly differently.

**Summary of Results**
- Children identified most strongly with gender-matched characters.
- Children perceived male characters as having greater expertise in STEM.
- Children’s interests in STEM did not differ by gender

**Discussion**
- There was evidence children’s STEM interest may not differ by gender during early childhood, providing support that gender differences in STEM may not appear until later in development.
- Although there were no differences in children’s interest in STEM, children did perceive male characters as greater STEM experts than females. This likely represents young children’s awareness of gender stereotypes about STEM.
- Children’s expertise judgments were not due to identification with characters, as there was a disconnect between children’s identification with characters and perceived expertise of characters.
- Future research should consider the ways characters on television and in interactive games contribute to later emerging gender differences in STEM.

**References**

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