

## ABSTRACT

The goal of this study is to determine whether prosocial television and apps affect children’s socio-emotional development and parents’ attitudes and behaviors. Influences were noted on children’s use of emotional regulation strategies and theory of mind, as well as on parent’s affect towards their children and awareness of parenting tools.

## INTRODUCTION

Extensive research, including studies by Calvert and Bryant, has consistently supported that watching educational programming promotes improvements in education-related skills such as comprehension (Calvert, 2001) and problem solving in children (Bryant et al., 1999). However, there has been much less research into how educational, prosocial media affects young children’s social and emotional development.



<http://www.pbs.org/parents/daniel/products/>

The current study uses the television show Daniel Tiger’s Neighborhood and its corresponding tablet app to look at three major research focuses:

1. How Daniel Tiger influences preschoolers’ social and emotional development
2. Parenting Outcomes
3. How are participants’ outcomes influenced by exposure to the app vs. the show, parental mediation, and demographic variables

## METHODS

### Participants

120 children and 120 parents across 3 sites:

- Vanderbilt Early Development Lab collected data for 30 children and their parents.
- All between 36 months and 60 months
- Slightly over half of the participants were female (n= 65)
- The majority of participants identified as white, with 4% identifying as Hispanic, 3% identifying as Black/African American, and 1% identifying as other
- The parents were predominantly young mothers with a bachelor’s or graduate degree

### Conditions

- Condition 1: Watching Daniel Tiger’s Neighborhood and playing the Daniel Tiger app
- Condition 2: Watching a Control program and playing the Daniel Tiger app
- Condition 3: Watching the Control program and playing the corresponding Control app



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# Impact of Prosocial Media on Children’s Socio-Emotional Development

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## PROCEDURES

- 3 visits to the lab over 6 weeks, each visit lasting for one hour
- Children completed the same set of standardized tasks each visit, which measured elements of socio-emotional development including:
  - Empathy
  - Self-esteem
  - Self-efficacy
  - Emotional competence
- Parents filled out a different questionnaire at each visit measuring:
  - Sense of competence
  - Awareness of parenting tools
  - Well-being
  - Self-expressiveness
  - Empathetic concern for child
  - Parental affect
  - Behaviors related to media (active mediation, restrictive mediation, and covieing)
- Between visit 1 and visit 2, the child was asked to watch daily 11-minute episodes of Daniel Tiger or a control television show and play with either the corresponding Daniel Tiger app or a corresponding control app, depending on the condition, for 10 minutes every day for 9 consecutive days. The parent completed a media diary during this time to track what media the child was exposed to.

### Empathy Tasks



### Self-Esteem Tasks



### Emotional Competence Tasks

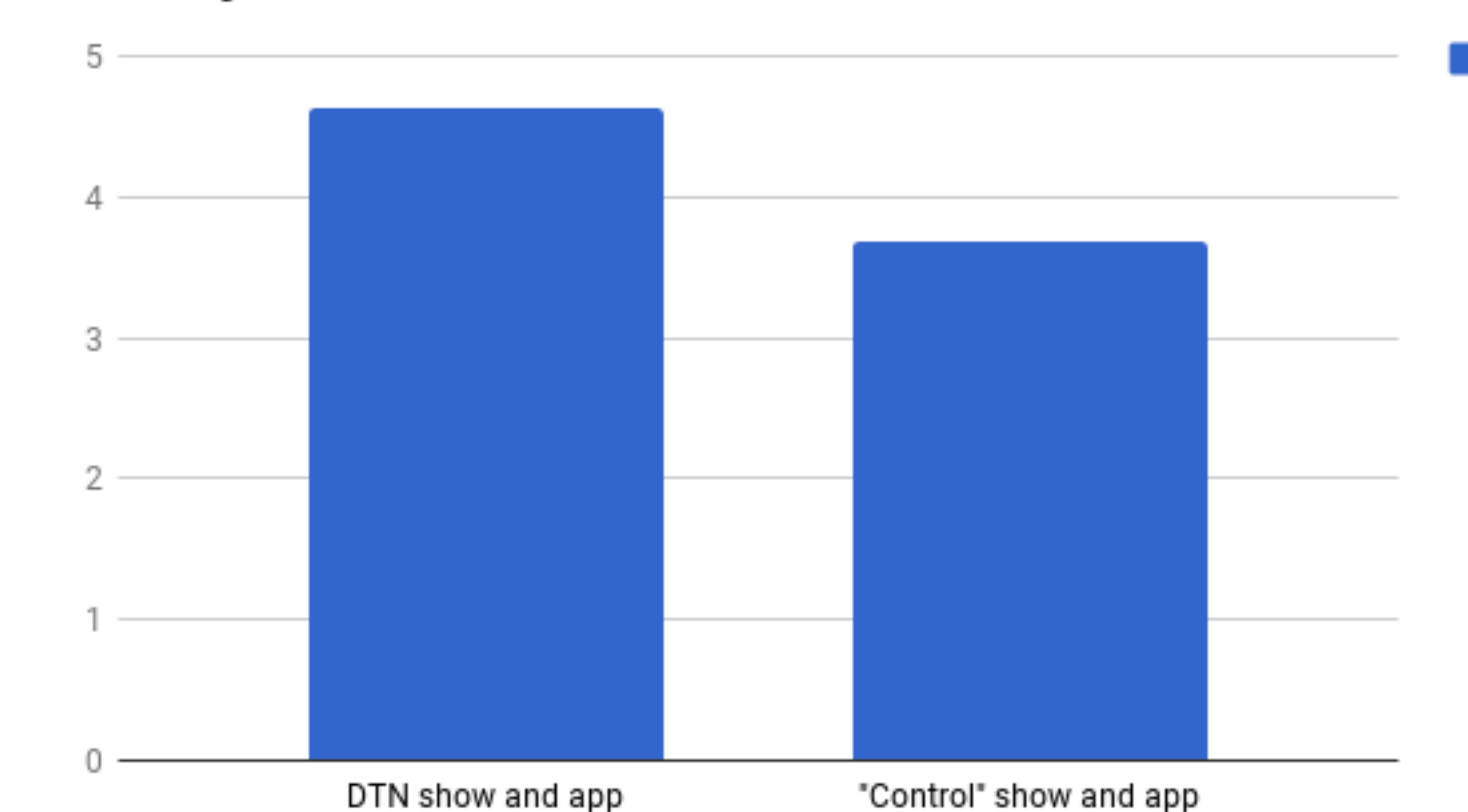


### Self-Efficacy Tasks

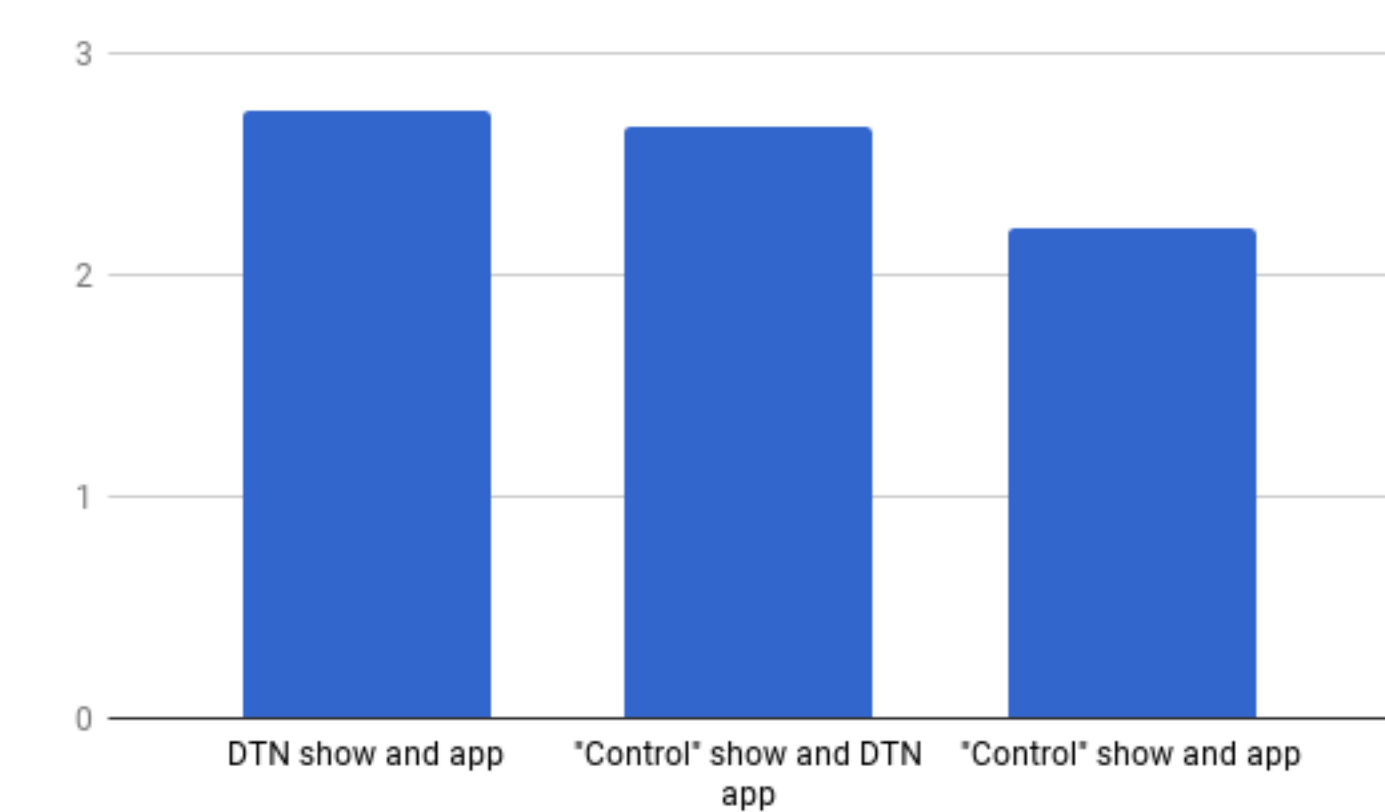


## RESULTS

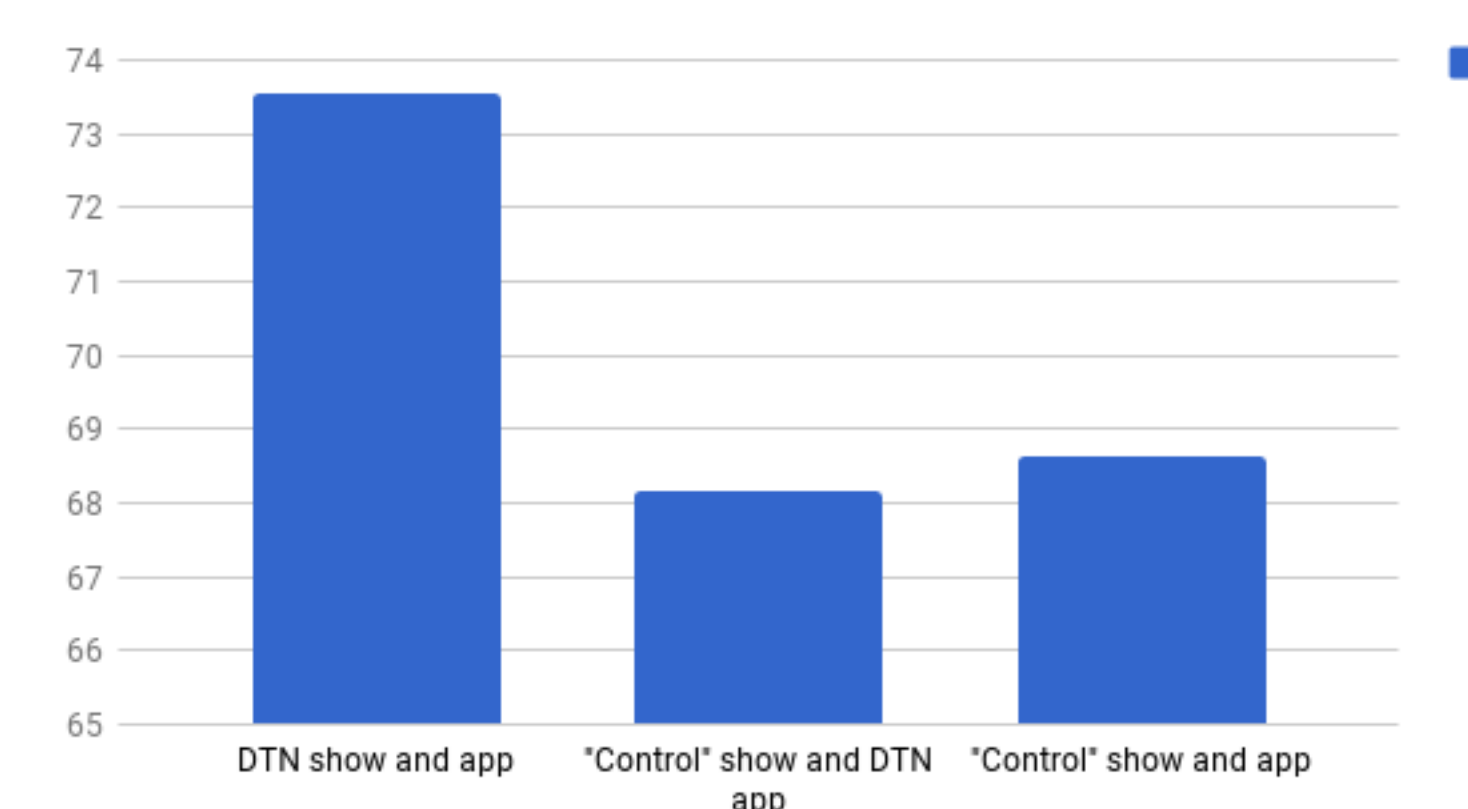
### Theory of Mind at Visit 3



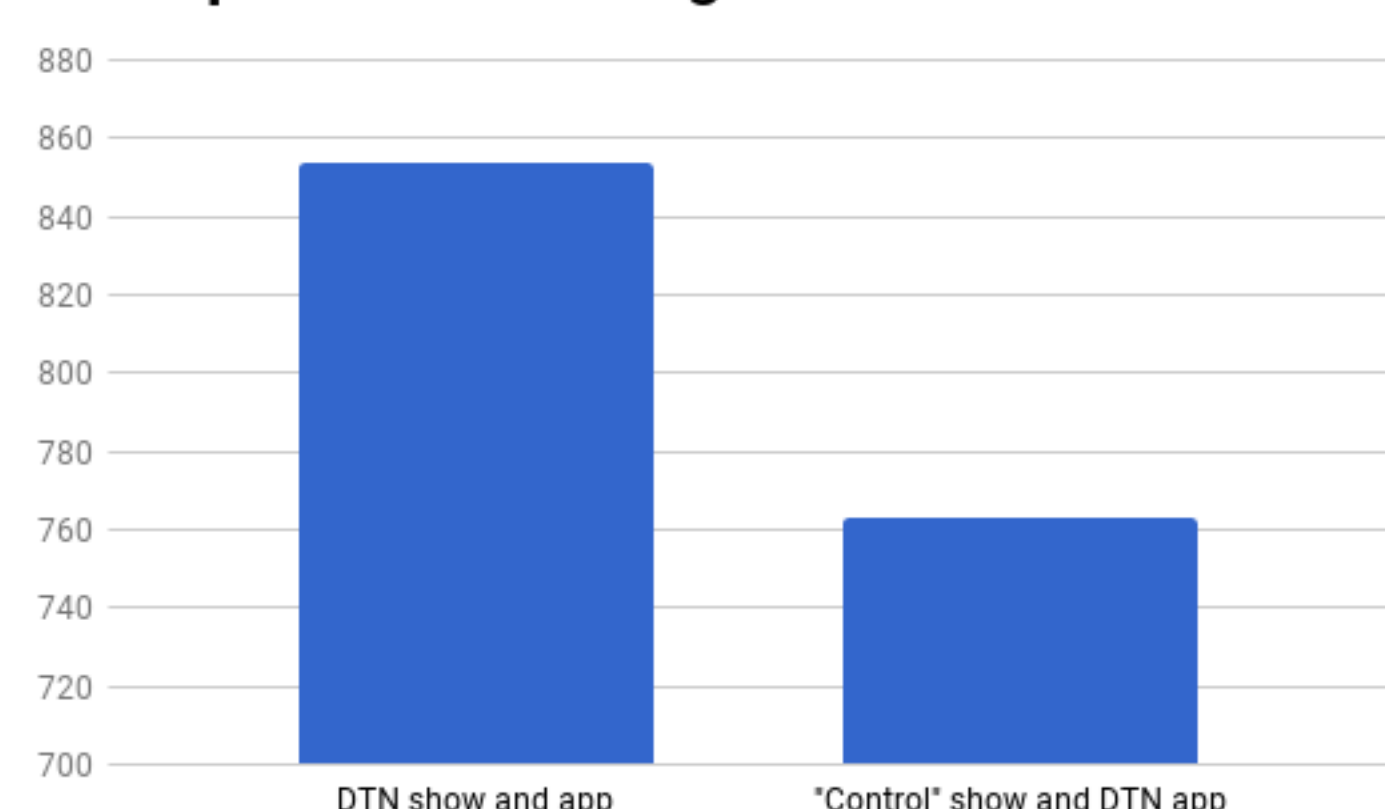
### Use of Emotion Regulation Strategies at Visit 3



### Parent Affect at Visit 2



### Perception of Parenting Tools at Visit 3



(graphs from Rasmussen et al., 2017)

### Summary of Results

1. Exposure to the show and app resulted in an increased use of emotion regulation strategies, as reported by parents, and better performance on theory of mind tasks
2. Parent of children in Condition 1 reported having higher parental affect
3. Parents of children in Conditions 1 and 3 reported a greater awareness of parenting tools. Parents of children in Condition 2 reported much lower awareness of parenting tools. (Rasmussen et al., 2017)

## DISCUSSION



<http://www.trustedreviews.com/news/deal-amazon-fire-kids-edition-tablet-discounted-to-just-79-2953063>

•This is the first study (that we know of) that shows that children exposed to Daniel Tiger’s Neighborhood displayed advanced theory of mind. Development of theory of mind is essential to social development because it is the understanding that other people may think differently from oneself.

•This also appears to be the first study showing that children exposed to Daniel Tiger’s Neighborhood used emotional regulation strategies taught by Daniel Tiger in everyday situations. Participants not only learned the strategies, but applied them in novel situations, displaying a retention of learning and deeper understanding.

•Importantly, parents also benefitted from exposure to this show, perceiving that they had more tools for effective parenting.

•One noteworthy pattern in the data was that most outcomes depended on exposure to the Daniel Tiger show; exposure to the Daniel Tiger app did not have an appreciable effect on the results. One exception was that parents exposed to complementary media (i.e. parents in Conditions 1 and 3) reported more positive perceptions of their parenting ability. This suggests that the use of both television shows and their corresponding apps might have a positive impact on parent outcomes; however, more research is needed to determine the extent to which the use of program-related apps contribute and if they have any other effects on the socio-emotional development of preschoolers.

### Limitations

Our research design did not allow for exploration of the extent to which the television show and the app separately influenced development.

## REFERENCES

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