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# Response Time Scores on a Reflexive Attention Task Predict a Child's Inattention Score from a Parent Report

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# Response Time Scores on a Reflexive Attention Task Predict a Child's Inattention Score from a Parent Report

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## Introduction

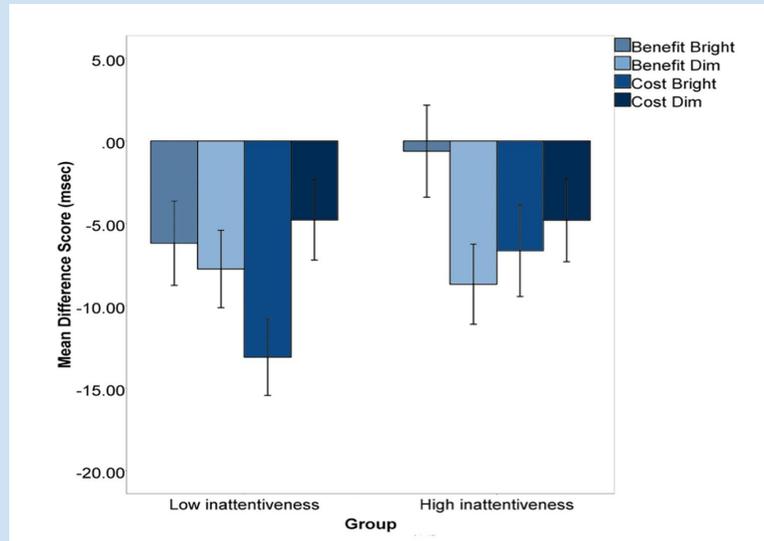
- Children with attention deficits have problems with sustained and reflexive attention tasks
- Few studies measure reflexive attention as a component of day-to-day attention in children
- Parents also have valuable insight into children's behavior
- We want to identify associations between computer-based reflexive attention task performance and parent-rated attention-related problems.

## Method

- Participants
  - 196 children, 98 (50%) female
  - Mean age 12.96 years (range of 10.58-16.55 years)
- Measures
  - Parents completed MacArthur Health and Behavior Questionnaire, Parent Version
  - Children completed spatial-cueing task
- Statistical Analyses
  - Used general linear modeling
    - Gender and age as covariates

## Results

- Inattention and impulsiveness were highly correlated
  - ( $r = .72, p < .001$ )
- Sex was correlated with impulsivity
  - Suggests boys may be more impulsive
  - ( $r = -.20, p = .01$ )
- Age was likewise significantly correlated with impulsivity
  - Indicates younger children may be more impulsive
  - ( $r = -.23, p = .001$ )

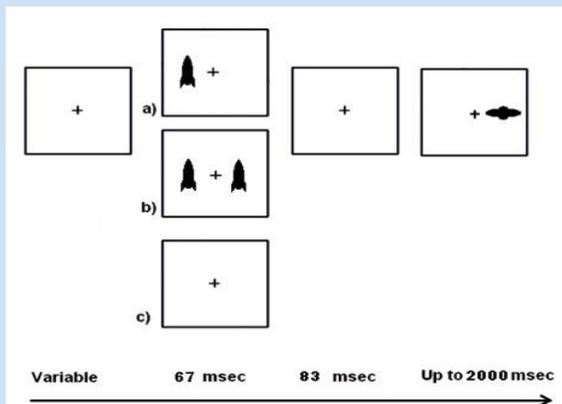


## Conclusion

- Parental insight into children's attention-related behaviors was associated with basic RT difference scores
- This finding suggests that:
  - Biological pathways might also be responsible for general day-to-day symptoms of inattention
  - Models of interactions between inattention, impulsivity, and inhibition and three types of error scores, predict academic outcomes
  - Training focused on reflexive attention may lead to increased engagement and subsequent success in schooling

## Application

- Stimuli to the side of the important information (e.g., in teaching slides) should not be bright
  - Could take some children about 6 seconds longer to process information on a slide covered for 2 minutes
- When driving, attentive youth might be subject to longer braking times if there are bright stimuli in the periphery
  - Increases likelihood of traffic accidents
- Replicating study with younger children could lead to early diagnosis and intervention for those with attentional difficulties



Schematic of Spatial-Cueing Task

- Main Analysis
  - Inattention was the only predictor that was significant in predicting the combined dependent variables
  - (Pillai's Trace = .06;  $F[4,187] = 2.72; p = .03, \eta^2 = .06$ )
- Followup ANOVA
  - Benefit bright ( $p = .02$ ) and cost bright ( $p = .01$ ) were significant variables in predicting parent-rated inattention
    - Children with lower inattention scores had more pronounced negative RT difference scores for benefit bright and cost dim trials

