Reactivity and Regulatory Processes Underlying Children's Ruminative Tendencies

Sarah D. English, Linda Sosa-Hernandez, McLennon Wilson, Emma S. Green, Heather A. Henderson

Social Development Lab, Department of Psychology, University of Waterloo

INTRODUCTION

- Inhibitory control refers to children's ability to override a dominant response in favour of a dominant one[1]
- Too much *and* too little inhibitory control may be maladaptive; particularly for children who already experience high levels of behavioral inhibition in novel and challenging situations[2,3]
- Together, reactive (social anxiety) and regulatory (inhibitory control) tendencies may inflate children's risk of experiencing negative cognitions, such as "getting stuck" in repetitive, negative thought patterns (i.e., rumination)
- Ruminative tendencies are typically assessed using self-report[4], which do not capture children's experiences of rumination *in-vivo*

We explored whether children's inhibitory control moderates the relation between self-reported social anxiety and a behavioral measure thought to reflect rumination on one's performance: post-error slowing[5]

HYPOTHESIS

Inhibitory control will moderate the relation between social anxiety and rumination in a U-shaped pattern, where social anxiety will be related to greater rumination at both high *and* low levels of inhibitory control

METHOD

PARTICIPANTS
- 91 7-year-olds (M_{age} = 7.31, SD = .30)
  - Only children who made errors on the DCCS were included in the analysis, resulting in a final sample of 58 7-year-olds (M_{age} = 7.28, SD = .28)

MEASURES
- **Social Anxiety –** Child report on the social anxiety subscale of the Screen for Child Related Anxiety Disorders-Child Version (SCARED-Child)[6]
- **Inhibitory Control –** Parent report on the Inhibit subscale of the Behavior Rating Inventory of Executive Function (BRIEF)[7]
- **Post-Error Slowing (PES) –** Reaction times on trials following an error on the Dimensional Change Card Sort (DCCS)[8] **(PES = RTec – RTcc)**
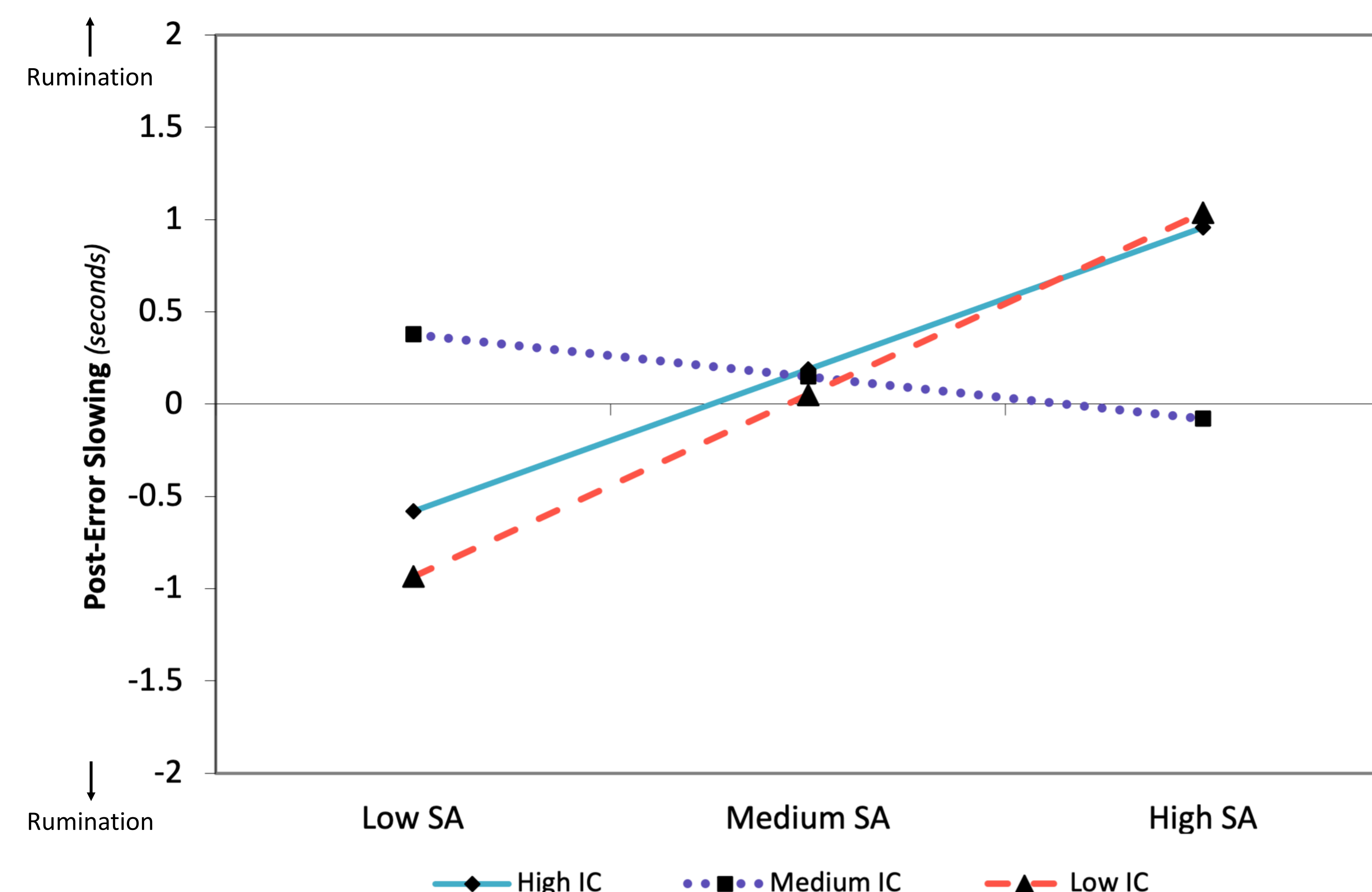
RESULTS

Figure 1. *The relation between self-reported social anxiety and post-error slowing times on the DCCS at low, medium, and high levels of inhibitory control*

RESULTS

- As predicted, we found a significant interaction of self-reported social anxiety and post-error slowing, where the relation between the two depended on the child's level of inhibitory control (**b = .002, p = .043**)
  - Children with high *and* with low inhibitory control showed increased RTs (i.e., greater post-error slowing) at high levels of social anxiety, but showed decreased RTs (i.e., less post-error slowing) at low levels of social anxiety

DISCUSSION

- Different *combinations* of reactive and regulatory processes drive children's behavioral response
- Average levels of inhibitory control led to optimal performance regardless of level of social anxiety
  - Suggests potential resiliency pathway
- "Double-edged sword" of inhibitory control in the context of children's individual difference in reactive and regulatory tendencies
- Future studies may consider how social feedback impacts post-error slowing, as well as subsequent interactions with a social partner

REFERENCES

1. Rothbart et al. (2003)
2. Hassan & Schmidt (2022)
3. Henderson & Wilson (2017)
4. Ehring (2017)
5. Buzzell et al. (2017)
6. Birmaher et al. (1999)
7. Gioia et al. (2000)
8. Bauer & Zelazo (2014)