



Individual Differences in Personality, Temperament, and Grit and the Effectiveness of the Psychological Distancing Strategy in Young Children

Amanda Grenell¹, Emily O. Prager¹, Catherine Schaefer², Ethan Kross³, Angela Duckworth⁴ & Stephanie M. Carlson¹



University of Minnesota¹, Pennsylvania State University², University of Michigan³, and University of Pennsylvania⁴

INTRODUCTION

- Self-regulation is related to later life outcomes (Moffitt et al., 2011) and academic achievement (Duckworth & Carlson, 2013).
- Self-distancing (taking a distanced point of view) improves emotion regulation in adults (Kross & Ayduk, 2011) and improves executive function (EF) (White & Carlson, 2015) and persistence (White et al., 2017) in 5- to 6-year-old children.
- Previous research has found the effectiveness of self-distancing in children is related to age (White & Carlson, 2015; White et al., 2017) and theory of mind (White & Carlson, 2015).
- However, unknown how individual differences in EF, personality, temperament, and grit relate to the effectiveness of self-distancing.

Research Question

Do individual differences in EF, temperament, grit, and personality relate to the effectiveness of the self-distancing manipulation for preschoolers and early school-aged children during a frustrating task?

Hypotheses

- H1:** Children with low EF will benefit more from the self-distancing strategy.
- H2:** Children with low effortful control will benefit more from the self-distancing strategy.
- H3:** Children with less grit will benefit more from the self-distancing strategy.
- H4:** We had different hypotheses about the benefits of self-distancing based on the different Big 5 personality traits.

METHODS

Participants: 105 typically developing 4- and 6-year-olds: 55 4-year-olds (25 girls, $M_{age}=47.84$ months, $SD=.57$) and 50 6-year-olds (25 girls, $M_{age}=71.66$ months, $SD=.52$)

- Mostly Caucasian and upper middle-class
- Randomly assigned to 1 of 3 groups: self-immersed, third person, or exemplar

Procedure: Children visited the lab for a 60-min session

- Children completed frustrating task and control measures to assess theory of mind, baseline EF (NIH Toolbox DCCS and Flanker), and verbal ability
- Parents completed questionnaires about children's personality, temperament, and grit

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Frustrating Task: Locked Box Task (Goldsmith et al., 1999).

An attractive toy is locked in a transparent box and child has to try to unlock the box using a set of keys that do not work. Children given up to 10 min or until they decided to stop trying. Children given a self-distancing strategy to use and heard audio reminder of strategy every 60 sec.



Self-Distancing Manipulation

Self-Immersed	Third-Person	Exemplar
"How am I feeling?"	How is [child's name] feeling?	How is [media character] feeling?

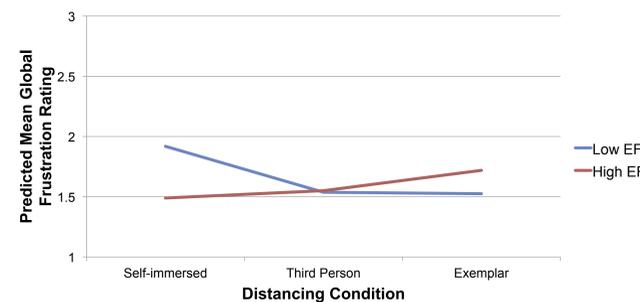
Parent Questionnaires

	Personality	Temperament	Grit
Questionnaire	Big 5 Scales for the California Child Q-set (John et al., 1994)	Children's Behavior Questionnaire (CBQ)-Very Short Form (Putman & Rothbart, 2006)	Short Grit Scale (Duckworth & Quinn, 2009)
Characteristics Measured	Openness, Conscientiousness, Extraversion, Agreeableness, Neuroticism	Effortful Control, Surgency, and Negative Affectivity	Grit

Frustration Task Coding: All videos coded for **total time on task** and **global frustration rating** (1-3 score based on frequency of signs of frustration).

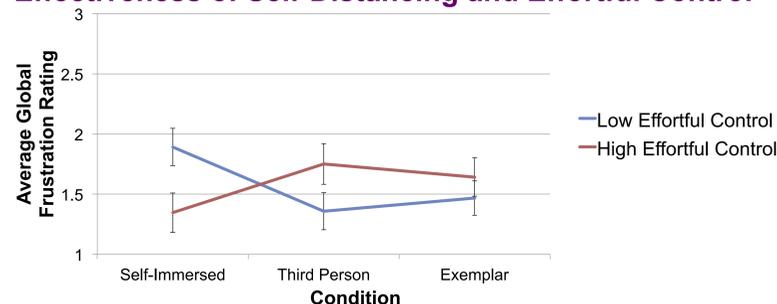
RESULTS

Effectiveness of Self-Distancing and Executive Function



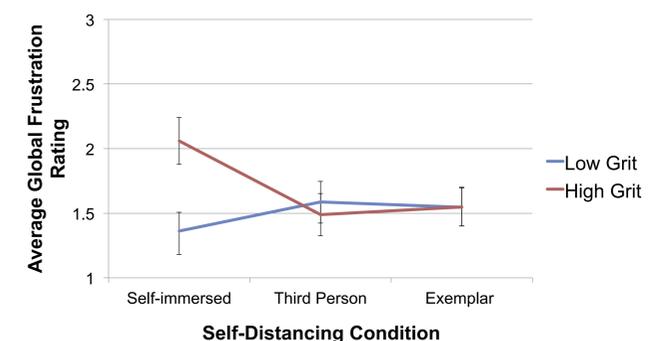
- Significant self-distancing condition x initial EF level interaction
- Significant differences between high and low EF kids in the self-immersed and exemplar condition, $t = 2.64, p = .01$

Effectiveness of Self-Distancing and Effortful Control



- Significant self-distancing condition x effortful control interaction, $F(2,98) = 4.75, p = .01$, controlling for task time.
- Children with low effortful control were significantly more frustrated in the self-immersed condition ($M = 1.94, SD = .64$) than in the third person ($M = 1.33, SD = .59$) and exemplar condition ($M = 1.42, SD = .60$).
- No significant condition differences for high effortful control children.

Effectiveness of Self-Distancing and Grit



- Significant condition x grit interaction, $F(6,97) = 3.04, p = .009$.
- Children with high grit in the self-immersed condition ($M = 2.08, SD = .76$) were significantly more frustrated than those in the third person ($M = 1.43, SD = .73$) and exemplar condition ($M = 1.56, SD = .70$).
- No significant differences for low grit children.

Effectiveness of Self-Distancing and Personality Measures

- No significant interaction between self-distancing condition and any of the personality traits.

DISCUSSION

- Effectiveness of self-distancing depends on individual differences in EF, temperament and grit.
- Children with low EF, low effortful control and high grit benefited most from the self-distancing strategy such that they got less frustrated as the distance increased
- Future research should focus on other individual differences in the efficacy of self-distancing to inform the creation of more effective and personalized interventions.

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