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2023

Does Having Siblings Affect Caretaking Responses to Infants?

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Recommended Citation

Worthington, Joshua and Boone, Nathan, "Does Having Siblings Affect Caretaking Responses to Infants?" (2023). *IdeaFest 2023*. 106.

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DOES HAVING SIBLINGS AFFECT CARETAKING RESPONSES TO INFANTS?



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BACKGROUND

'Baby schema' refers to infant characteristics that positively influence cuteness perceptions and trigger caregiving and protective behaviors in adults^①. Previous neuroimaging work has demonstrated that 'baby schema' activates reward-related regions in the brain^② and behavioral work suggests that the reward value of 'baby schema' is linked to maternal tendencies^③. The factors that contribute to individual differences in the reward value of 'baby schema' (i.e., cute infant facial characteristics) are poorly understood. These effects have primarily been explored as they relate to parental care^④, however infants often receive alloparental care and it would be important for any caregiver to respond to infant cues effectively. Because siblings often fulfill a caregiver role in the home, this study investigated whether having siblings, and younger siblings in particular, impacts the reward value of and perceptual sensitivity to the 'baby schema'.

PARTICIPANTS



107 with
younger siblings



64 with no
younger siblings



28 with
no siblings

PROCEDURE

Participants (age = 25.2 ± 7.6 yrs; 131 female, 57 male, 11 sex not provided) reported the number of siblings they have, age of each sibling, and the frequency with which they provided care for each sibling (1=hardly ever to 5=all the time). They then completed a rating task (N=194) and an effort-based keypress task^⑤ (N=154) to assess their sensitivity to 'babyschema' and the reward value of 'baby schema', respectively. For the rating task, they rated the cuteness of 20 infant faces (10 high + 10 low 'babyschema') on a 1 (not very cute) to 7 (very cute) scale. For the keypress task, they were able to control the length of time they engaged with each face by pressing alternating keys on their keyboard. Positive effort on this task has previously been linked to activity in reward-related regions of the brain. All data collection was done online and participants were free to cease participation at any time, resulting in different sample sizes for the two tasks.

ANALYSIS

Sensitivity to and reward value of 'babyschema' scores were calculated as the difference in cuteness rating (sensitivity) or number of keypresses (reward) for the high- vs low- 'babyschema' faces. A one-way ANOVA was run for these scores with sibling group as a between-subject factor.

DISCUSSION

Contrary to our hypotheses, having siblings did not influence the reward value of or perceptual sensitivity to 'babyschema'. Additional analyses exploring the potential impact of experience with younger siblings in particular revealed that number of younger siblings affected both perceptual sensitivity to and the reward value of 'babyschema', whereas the reported frequency of engaging in alloparental care for these siblings did not. This finding suggests that exposure or experience may influence the processing of 'babyschema' and infant faces may be susceptible to the 'expertise effect' seen for adult faces.

INFANT STIMULI

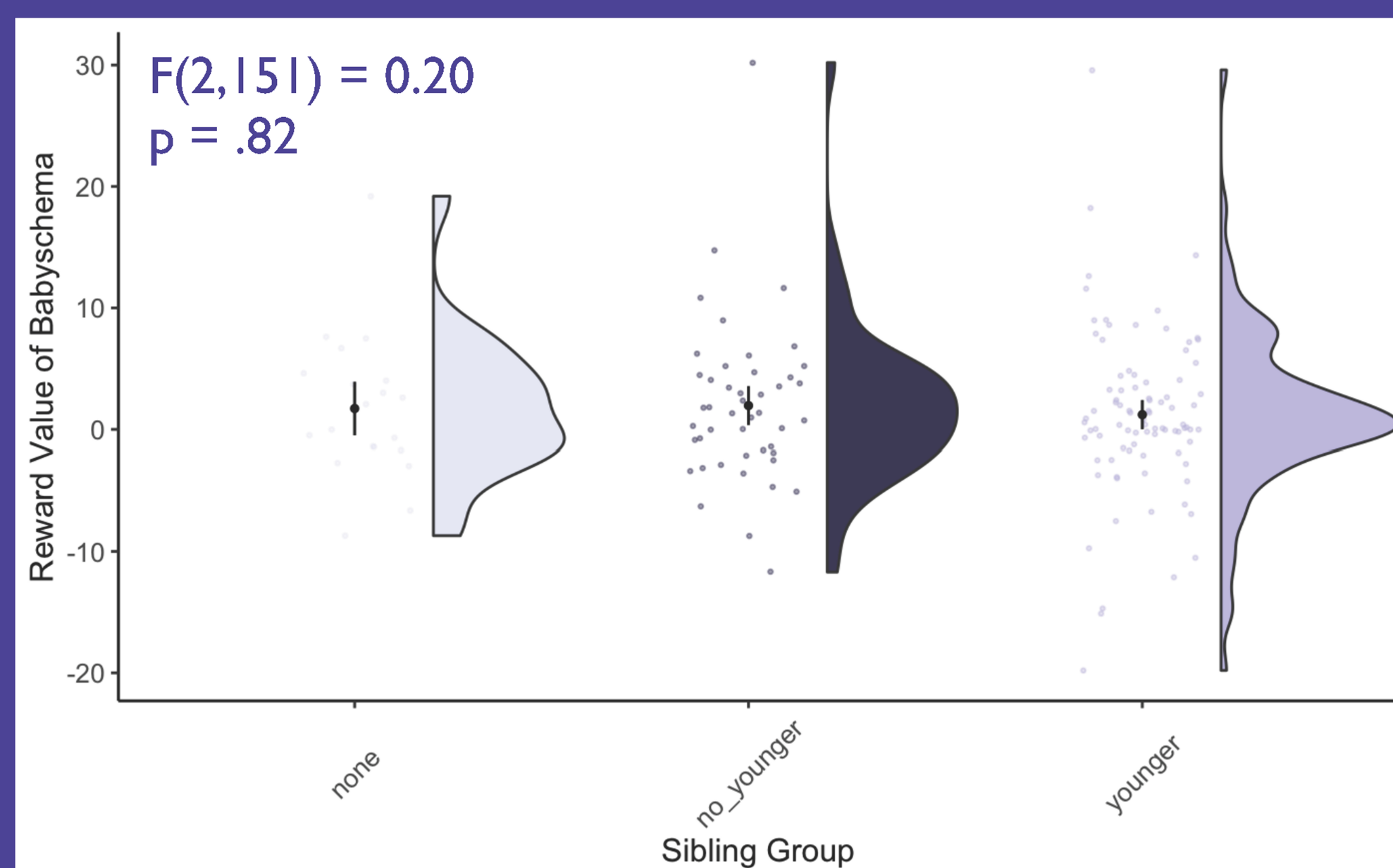


high
'babyschema'

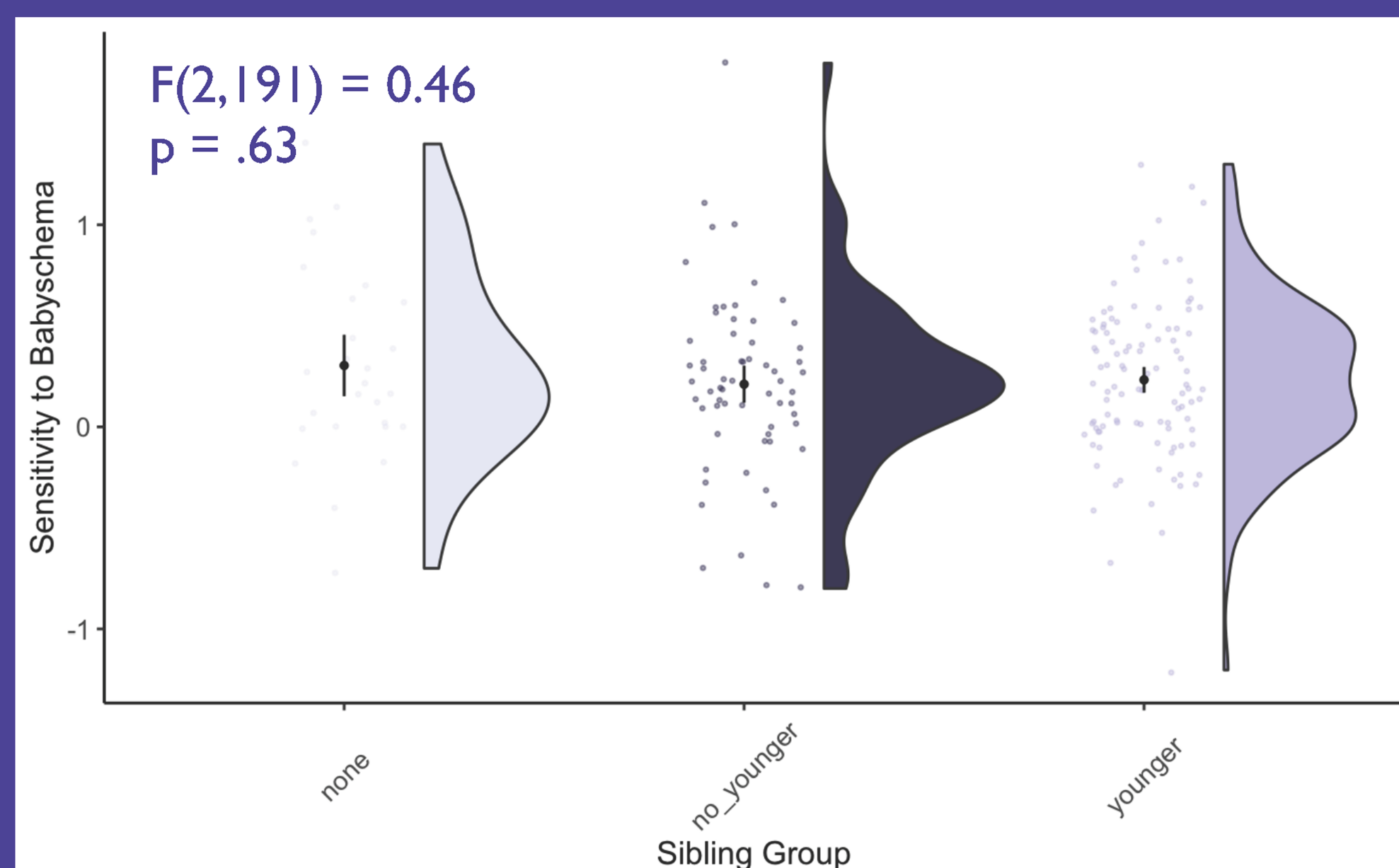


low
'babyschema'

RESULTS: REWARD VALUE



RESULTS: SENSITIVITY



REFERENCES

① Alley (1981) Dev Psych ② Glocker et al. (2009) PNAS ③ Hahn et al (2015) Biol Letters ④ Thompson-Booth et al. (2014) PLoS ONE ⑤ Parsons et al.. (2011) PLoS ONE