

DOES HAVING SIBLINGS AFFECT THE RECOGNITION OF CHILDREN'S EMOTIONAL DISPLAYS?

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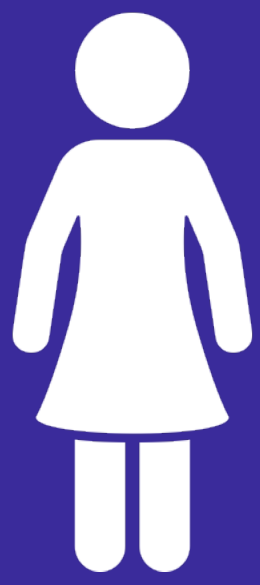
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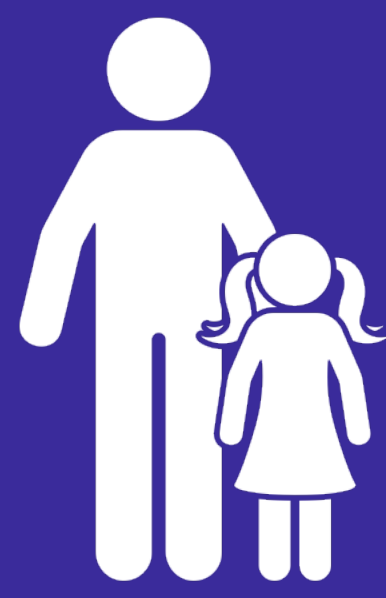
BACKGROUND

Facial emotional expressions, a form of nonverbal communication, are crucial for infant and child caregiving. Recognizing these facial expressions is important for sensitive maternal attunement. Reflecting this, mothers are more attentive to infant faces¹ and better at recognizing facial emotional expressions than non-mothers². However, caregiving responsibilities are often shared with other family members, including older siblings. Sibling caretaking is very common³, but it is not currently known whether people who care for younger siblings experience the same emotion recognition improvements as mothers. The current study aimed to assess accuracy in detecting emotional displays from children in adults with and without siblings to further explore this issue. We predicted that because those with younger siblings are more likely to have engaged in alloparental caregiving behavior, they may have developed stronger abilities to accurately detect emotional displays in children's faces than those with out younger siblings.

PARTICIPANTS



No Siblings
(n = 34)



Younger siblings
(n = 92)



Older siblings
(n = 47)

PROCEDURE

Participants (avg age = 25, 69% female, 54% white) were shown 60 images of children's faces and were asked to identify the emotion in each image (happiness, anger, surprise, sadness, disgust, fear). The proportion of correctly identified faces was then calculated for each participant for each of the 6 emotion categories.

STIMULI



60 children's faces (10 identities photographed with each of the 6 emotional expressions) were shown in a fully randomized order.

DISCUSSION

Our results showed that participants across all sibling groups were better at recognizing some emotions than others. In particular, participants were most accurate in recognizing happy emotional displays. This observation replicates previous findings which indicate that happiness is easier to recognize in faces than fear, disgust, or sadness in adult faces⁴. Contrary to our prediction, we found no evidence that participants with younger siblings had more accurate emotion recognition than participants without younger siblings. These results challenge our expectation that caring for younger siblings would lead to increased sensitivity to emotional displays in children's faces. It may still be possible that engaging in alloparental caregiving behavior enhances salient responses to children's social cues but simply having younger siblings does not necessarily lead to this increased sensitivity. Future studies should explore alloparental care more broadly (e.g., grandparents, aunts/uncles, etc) and directly measure time spent engaging in caretaking behavior.

REFERENCES

¹ Thompson-Booth et al. (2013) *Dev Sci*, 17, 35-46. ² Matsunaga et al. (2018) *PLOS ONE*, 13(10), e0205738. ³ Wikle et al. (2018) *Social Science Research*, 71, 72-84. ⁴ Guarnera et al. (2018) *The Journal of Genetic Psychology*, 179(5), 297-310.

RESULTS

A 3 (sibling group) x 6 (emotion) mixed ANOVA revealed no main effect of sibling group (i.e., overall differences in emotion recognition accuracy between sibling groups; $F(2, 159) = 0.72, p = .49, \eta^2 = .002$), nor a significant interaction between sibling group and emotion type (i.e., differences between the sibling groups for specific emotions; $F(10, 795) = 0.99, p = .45, \eta^2 = .009$). However, there was a significant main effect of emotion type (i.e., some emotions were more accurately recognized than others; $F(5, 795) = 165.92, p < .001, \eta^2 = .44$). Bonferroni-adjusted pairwise t-tests indicated that each of the 6 emotions differed significantly from the others (all $p < .05$).

