Mimicry and social affiliation with virtual partner are decreased in autism
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INTRODUCTION
• Mimicking other people’s mannerisms and gestures occurs spontaneously and enhances social affiliation and interaction quality among neurotypical (NT).
• Mimicry of emotional facial expressions is known to be decreased in autism spectrum disorders (ASD).
• Yet, non-facial/non-emotional mimicry may also be reduced in ASD due to sensorimotor integration issues and/or the (ir)relevance of mimicry for social interactions in ASD.

HYPOTHESIS 1: ASD children will mimic their partner less than NT children.
HYPOTHESIS 2: Mimicry and affiliation will be positively associated in the NT group. Whether this link holds in ASD is explored.

RESULTS
• Due to the positive skew of the mimicry data, zero-inflated negative binomial regression was used.
• 79% of NT children and 56% of ASD children mimicked their partner at least once.

• ASD group showed reduced mimicry (p = .001, φ = .38) and less affiliation (p = .01, φ = .33) compared to NT.
• Mimicry was positively associated with affiliation in the NT (p = .009), but not ASD group (p = .72). Across diagnostic groups, mimicry was negatively associated with SRS-2 (p = .004), likely reflecting the diagnosis-based clustering of SRS-2 data.

METHODS
• Participants with a complete dataset included 60 children (32 ASD, 28 NT), all aged 8-12 years.
• Children played a story-telling game with a virtual partner. In 5 blocks, they first listened to their partner tell part of a story, and then told it back to her.

HIGHLIGHTS
• Neurotypical (NT) people unconsciously copy (“mimic”) others’ actions and gestures during a social interaction.
• In NT interactions, mimicry enhances social affiliation.

How does non-facial mimicry manifest in ASD children?
What does mimicry mean for social affiliation in ASD?
• During a story-telling game with a virtual partner, ASD children mimicked their partner less than NT children.
• While NT children who mimicked also liked their partner more, mimicry was not related to affiliation for ASD children.

CONCLUSIONS
• While autistic children mimic others less, their degree of mimicry is unrelated to their feelings of affiliation.
• Reduction in non-facial / non-emotional expressions in ASD suggests that fundamental sensory-motor integration issues, rather than inattention or an inability to recognise emotions, may account for autism-associated differences in mimicry.
• Disrupted link between mimicry and affiliation for ASD children suggests that there may be alternative mechanisms through which autistic people establish and signal social affiliation.
• Future research can examine the sensory-motor mechanisms and alternative methods of facilitating social affiliation in ASD interactions.

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