

ABSTRACT:

What do children with autism attend to during imitation tasks?

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Individuals with autism show a complex profile of differences in imitative ability, including a general deficit in precision of imitating another's actions and special difficulty in imitating non-meaningful gestures relative to meaningful actions on objects. Given that they also show atypical patterns of visual attention when observing social stimuli, we investigated whether possible differences in visual attention when observing an action to be imitated may contribute to imitative difficulties in autism in both non-meaningful gestures and meaningful actions on objects. Results indicated that (a) a group of 18 high-functioning 8- to 15-year-olds with autistic disorder, in comparison with a matched group of 13 typically developing children, showed similar patterns of visual attention to the demonstrator's action but decreased attention to his face when observing a model to be imitated; (b) non-meaningful gestures and meaningful actions on objects triggered distinct visual attention patterns that did not differ between groups; (c) the autism group demonstrated reduced imitative precision for both types of imitation; and (d) duration of visual attention to the demonstrator's action was related to imitation precision for non-meaningful gestures in the autism group.

Keywords: Imitation, Visual attention, Autism, Action understanding, Eye-tracking, Gaze processing

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