

## Understanding the Link Between Biological Motion Processing and Social Responsiveness in Autistic and Nonautistic Persons

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Social development in autistic persons, for whom difficulties in social functioning are the basis of a diagnosis, has been evaluated in various ways. For example, behavioral paradigms used to assess biological motion (BM) provide insight into dynamic social information processing, whereas parent-report questionnaires are used to assess broader patterns of social functioning ability in everyday contexts. We assessed score concordance on these two disparate measurements of social development among autistic and non-autistic persons. We further assessed this relationship in relation to mental age (MA). The participants included 29 autistic (five females, 24 males; mean age = 12.47 years, mean MA = 10.90 years) and 29 non-autistic (eight females, 21 males; mean age = 10.40 years, mean MA = 11.21 years) participants. These groups were subdivided into high and low MA groups based on the median MA (10.57 years). A BM task was used to assess social perceptual processing via accuracy in identifying the walking direction of a point-light figure with increasing distractor dots. Social functioning was evaluated with the Social Responsiveness Scale (SRS-2) and MA was assessed with the Wechsler Abbreviated Scale of Intelligence. The autistic group showed significantly higher SRS-2 scores than the non-autistic group ( $p < .001$ ), reflecting greater social difficulties. However, the groups did not differ significantly in BM performance ( $p = .64$ ). BM and SRS-2 scores were significantly correlated when accounting for the diagnostic group ( $p = .048$ ). Further stratified by mental age group, BM was significantly associated with the SRS-2 in the higher MA group ( $p = .046$ ) but not in the lower MA group ( $p > .50$ ). These findings indicate that scores on perceptual and questionnaire-based measures of social functioning are linked at higher MA, indicating a role for cognition in the coherence of disparate aspects of social development.

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