Performance of Autistic People: Cartoon Version of Reading the Mind in the Eyes Test (RME)

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DESCRIPTION

People with autism are frequently stigmatized as being mindblind or having poorer socio-cognitive abilities than Neurotypicals (NTs). The mindblind account fails to take into consideration the double empathy problem, which arises when NTs do not consider the perspective of the autistic person, in addition to pathologises the autism condition. Failures in double empathy are frequently not seen as failures since neurotypical worldviews serve as standards by which neurodivergent preferences or strategies can be evaluated. Facial Emotion Recognition (FER) tests in particular, but many socio-cognitive tests in general, show the double empathy issue in autism research. FER evaluations are frequently specifically created to take advantage of NT strengths and autistic deficits. The Reading the Mind in the Eyes test (RME), for instance, was developed to spot autistic features like irregular eye-gaze. There is a rising effort to capitalize on the strengths inherent to neurodiverse diseases like autism, even though knowing weaknesses can assist identify areas of need. Tests like the RME may be modified in this way to identify autistic strengths and comprehend the situations in which differences between autistic and NT individuals are minimized.

According to research, anthropomorphism is one of autistic people's strength in social-cognitive domains. When communicating with animals, robots, dolls, cartoons, or avatars, anthropomorphism, or social cognition about nonhuman agents, is frequently used. The uncanny valley effect shows that NTs relate to real people more readily than anthropomorphic stimuli. However, it has been discovered that utilizing an anthropomorphised version of the Karolinska directed emotional faces task, autistic teenagers' FER has improved. Additionally, NTs frequently do worse on FER tests when the stimuli are anthropomorphic as opposed to human. This is probably due to their experience and familiarity with similar kinds of human agents that they frequently encounter in daily life. Contrarily, there is a lot of evidence to suggest that autistic individuals lack this predisposition for the purely human. Autistic people do not notice uncanniness in response to anthropomorphic faces or voices like Neurotypical (NT) people

do. It does not appear that FER tasks disadvantage autistic people the way they do NTs when they are performed on anthropomorphic agents. For instance, research revealed that while groups did not differ on canine FER, autistic children performed human FER less well than NTs. According to studies, autistic adolescents were indistinguishable from NTs while processing animal faces but displayed hypoactivation across the face-processing neural network when doing FER tasks with human faces. Additionally, the FER network's affective regions were more active in the autistic group in reaction to the animal faces. Researchers used FER with cartoon and real-world faces to examine autistic and NT adolescents. Autistic participants fared better on cartoon FER than NTs, despite NTs having an edge on human FER.

In the autistic community, a preference for anthropomorphic rather than human social stimuli is well-documented. Studies that document and categorize the Restricted Interests (RIs) of autistic individuals frequently include images of animals and cartoons. These RIs are a typical aspect of the autistic phenotype that may help explain social inequalities in the population. While spending time with any RI is delightful, autistic children and their parents have stated that spending time with anthropomorphic RIs may aid in the development of ToM Cartoons, for example, exaggerate a nonhuman agent's human characteristics, which may increase empathy for the agency and improve comprehension of the artist's intentions. Cartoon media is enjoyed by NTs as well, so it's unlikely that they have a "unusual" interest in it that would set them apart from autistic persons. Cartoons may be a tool to examine FER strengths in the autistic community because FER is simple to decipher in them and both autistic and NT persons find them to be amusing.

CONCLUSION

In conclusion, even though people with autism spectrum disorders and those who exhibit a high level of autistic features typically do worse on FER tests like the RME, utilizing an anthropomorphic version of this task may lessen these discrepancies. Recent research using a cartoon version of the

RME revealed that those with high levels of autistic traits did not perform worse than those with lesser levels of these traits. Here, using a sample of autistic individuals, we want to confirm and broaden these findings. For the cartoon version of the RME (C-RME), we predicted that autistic people would correctly identify more items than NTs, contrary to our hypothesis. In the cartoon version of the RME, the scores of people with Autism Spectrum Disorder (ASD) and Neurotypicals (NTs) would be equal.