Understanding Online interactions between Autistic and Non-Autistic People
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Background:
• Double Empathy problem proposes a bidirectional disconnection between autistic and non-autistic people (Milton et al., 2018).
• Preliminary evidence suggests the disconnection may be mitigated during online interactions (Marsh et al., in prep).
• Non-verbal behavior may be more indicative of rapport than verbal (Wang & Gratch, 2009).

Research Questions:
• Are there differences in facial expressivity between autistic and non-autistic people? (diagnostic effects)
• Does facial expressivity change depending on who you are interacting with? (dyadic effects)
• Do individual differences in facial expressivity predict rapport? (individual differences effects)

Method:
• 65 videos of adult dyads engaging in an online 3min discussion.
• Participants subsequently rated their rapport.
• 28 mixed neurotype dyads, 18 autistic dyads and 9 non-autistic dyads.
• Analyzed using OpenFace (AU04, AU06, AU12).
• Calculated frequency, intensity and synchrony of smiles and frowns.

Results:
• Rapport did not differ by diagnosis or dyad type.

Diagnostic effects
• No diagnostic differences in the frequency and intensity of facial expressions.

Dyadic effects
• No dyadic differences in the frequency and intensity of facial expressions.
• Synchrony differed between dyad types – mixed results based on measure:
  • Non-autistic > autistic & mixed (sync strength – smiles).
  • Non-autistic & mixed > autistic (time in sync – frowns).
  • Non-autistic & autistic < mixed (time lag - frowns).

Individual difference effects
• Individual differences in smiles did not predict rapport.
• Individual differences in frowns negatively predicted own and partner rapport.

Discussion:
• Frowns may be a better indicator of rapport than smiles.
• Results are not consistent with the Double Empathy Problem.
• Non-verbal communication may be appraised differently during online interactions.
• Online interactions may provide a level playing-field for autistic people to communicate.

Next Steps:
• Directly compare in-person and online interactions.
• Do online interactions provide opportunities for autistic people to better mask their autism?

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