

Facial mimicry and metacognitive judgments in emotion recognition – modulated by social anxiety and autistic traits?

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INTRODUCTION

SA : Mimicry present (Peter-Ruf et al., 2017) + enhanced for negative expressions (Vrana & Gross, 2004)

A : Automatic facial mimicry disrupted (Davies et al., 2016)

SA : Reduced confidence independent of task performance (Rouault et al., 2018)

A : Lower metacognitive accuracy in social cognitive tasks (DeBrabander et al., 2020)

SA : Bias for negative emotions in others (Machado-de Sousa et al., 2010)

A : Overall emotion recognition difficulties (Ujarevic & Hamilton, 2012)

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METHODS

57 healthy participants (7 ♀), 18 – 30 y/o ($M = 22.75, SD = 3.27$)

Stimuli: 60 videos of spontaneous facial expressions: anger, fear, sadness, surprise, happiness and neutral, adjusted from FEEDTUM database (Wallhoff et al., 2006)

Tasks (separate): Passive viewing (facial EMG) & Emotion Labeling

Facial EMG: Corrugator supercilii (mimicry of “frowns”) Zygomaticus major (mimicry of “smiles”)

Questionnaires: Social anxiety traits: **Liebowitz Social Anxiety Scale** (LSAS, Liebowitz, 1987) > scores: 7 – 73, ($M = 38.53, SD = 17.53$) Autistic traits: **Autism Quotient** (AQ, Baron-Cohen et al., 2001) > scores: 2 – 39 ($M = 16.47, SD = 7.34$)

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RESULTS

1 Sadness

2 Anger

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DISCUSSION

Distinct relationships to different processes in emotion recognition:

↑ Social anxiety traits :

- **underconfidence** despite unaltered emotion recognition performance
- potential mechanism: **negatively biased post-event processing** (Dannahy & Stopa, 2007)
 - > Metacognitive Training (MCT; Wells, 2009)

↑ Autistic traits :

- **worse recognition performance** (esp. fear) & **less integration of facial mimicry** (esp. sadness)
- potential mechanism: **lower interoceptive accuracy** despite heightened sensitivity (Garfinkel et al., 2006)
 - > Interventions focusing on interoception/body awareness

Limitations & future directions:

- Context-dependency of emotion perception → real social interactions
- Research in clinical populations

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