

Typical pain experience but underestimation of others' pain: Emotion perception in self and others in autism spectrum disorder

Hanna Thaler, Joshua C Skewes, Line Gebauer, Peer Christensen, Kenneth M Prkachin and Else-Marie Jegindø Elmholdt

Difficulties perceiving others' emotions are common in autism spectrum disorder (ASD). One reason for these difficulties could be a general problem of relating to own and others' emotions. An alternative explanation is that the challenge only lies in understanding others' expressions. This study compared these explanations, focusing on how people with and without ASD experience the emotion of pain. Thirty-two male participants (sixteen with a diagnosis of ASD) evaluated the pain of shoulder patients, seeing videos of their facial expressions. Participants also received electrical pain stimulation, designed to be at the same intensity levels as the experience of shoulder patients (from no pain to moderate pain). Participants with ASD underestimated the pain of shoulder patients, and rated their own pain to be more intense than the pain of others. Yet, participants with and without ASD resembled each other in how unpleasant they felt about seeing others' pain. This is in line with previous results, showing that people with ASD do not have difficulties with emotional empathy. Participants with and without ASD also rated the intensity and unpleasantness of own pain experiences in a similar way. Findings of typical pain responses in people with ASD do not support the idea that they find it challenging to relate to emotions more generally. It seems that they mainly have difficulties interpreting others' expressions. Extending these findings to emotions other than pain can help clarify how own emotions relate to others' emotions in ASD. This may be useful for interventions targeted at social cognition.