The influence of being imitated on empathy for pain

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Abstract

Social-psychological research suggests that being imitated leads to prosocial behaviour and changes the way we experience others (Chartrand & Bargh, 1999). While the positive consequences of being imitated have been demonstrated for relatively complex social behaviour (van Baaren, Holland, Kawakami, & van Knippenberg, 2004), the question arises whether it also influences more basic functions such as observing others in pain. Research indicates that perceiving another person in pain results in pain-related brain activation in the observer (empathy for pain; Singer et al., 2004). The aim of the present study was to investigate whether being imitated can modulate empathy for pain. To this end, we developed an experimental approach combining a simple imitation task with a pain perception task: participants had to carry out finger lifting movements that were either imitated by a previously videotaped hand on screen (imitation block, e.g. subject lifts index finger – hand on screen lifts index finger) or not (non-imitation block, e.g. subject lifts index finger – hand on screen lifts middle finger). At the end of each block, the hand on screen received painful stimulation (e.g. a paper cut to the hand). Subjective reports on own- and other-related pain experiences were higher after being imitated compared to not being imitated. Furthermore, a larger startle blink amplitude (reflecting negative affect) and a larger heart rate deceleration (reflecting an orienting reflex) were also present in the former condition. Thus, we have found evidence with different measures that being imitated enhances affective responses when observing someone else in pain.

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