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CHANGING TACTILE AMPLITUDE AND FREQUENCY PERCEPTION VIA AUTOSUGGESTION

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Background: Autosuggestion is an instantiation and reiteration of ideas or concepts by oneself aiming to actively influence one's own cognitive and physiological states. Despite its potential beneficial clinical effects, for example in reducing chronic pain, autosuggestion has gained little scientific attention so far.

Aims: Here, we tested the effects of autosuggestion on tactile amplitude perception using implicit measurements.

Method: In the experimental design, we made use of a known interaction effect between amplitude and frequency perception in touch. We asked participants to manipulate their perception of the strength of touch via autosuggestion and tested the indirect effect on frequency perception (implicit measure). Participants received two touches, first on their left (reference) and second on their right (test) index finger. The main task was to indicate if the touch on the test finger was higher or lower in frequency than the touch on the reference (baseline condition). In the autosuggestion condition, participants were asked to perceive the touches on the reference finger as very strong (Exp 1) or very weak (Exp 2), which we expected to influence frequency judgments.

Preliminary results: We found that that frequency perception was lower at the test finger in the autosuggestion compared to the baseline condition when participants were asked to perceive the reference touch as stronger as possible (Exp 1), suggesting that autosuggestion was effective in altering participants tactile perception. In Experiment 2, frequency perception was significantly higher at the test finger, when participants were asked to perceive the reference touch as weaker as possible. Unexpectedly, the reverse effect was found for those participants who show a reverse coupling between amplitude and frequency. Our results suggest that autosuggestion is effective in altering participants frequency perception, most likely via their internal change in amplitude perception. More research is needed to explain the effects in participants with reversed response trends.

Keywords: Autosuggestion, Touch, Tactile frequency perception, Implicit measures

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