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Proceedings of the Annual Meeting of the Cognitive Science Society

Title

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Permalink

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Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 46(0)

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Publication Date

2024

Peer reviewed

The effects of mindfulness meditation on peripersonal space

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Abstract

Peripersonal space (PPS) is the multisensory representation of the near-body space. Several factors modulate PPS size and the sharpness of the boundary separating PPS and the far extrapersonal space, suggesting that PPS may be involved in the subjective experience and in the self-other representation. Such representations seem to be shaped by mindfulness meditation (MM); however, evidence on the effects of MM on PPS is limited. To test the hypothesis that MM modulates both PPS size and the sharpness of PPS boundary, we enrolled 26 non-meditators, who performed an audio-tactile task before and after a 15-minute guided focused attention meditation (FAM). Despite no changes of PPS size, after FAM we found a significantly reduced sharpness of PPS boundary, as if it dissolved. We suggest that the reduced separation between the self and the environment, reported by meditators in some phenomenological studies, may relate to the altered PPS sharpness.