

Frontiers - Special Research Topic: The Arts Therapies and Neuroscience

This is a special topic issue curated by several prominent authors of publications at the intersection of art therapy and neuroscience, Noah Hass-Cohen, Sharon Vaisvaser, Rebecca Bokoch, and Christianne E. Strang. The collection contains 20 publications across several journal titles: Frontiers in Psychology, Frontiers in Psychiatry, Frontiers in Human Neuroscience, and Frontiers in Cognition.

[The Arts Therapies and Neuroscience Research Topic Collection](#)

(Articles will be included individually in corresponding sections in this bibliography).

Theoretical Perspectives

Beerse, M. E., Van Lith, T., Pickett, S. M., & Stanwood, G. D. (2020). Biobehavioral utility of mindfulness-based art therapy: Neurobiological underpinnings and mental health impacts. *Experimental Biology and Medicine*, 245(2), 122-130.

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- Hass-Cohen, N. (2016). Secure Resiliency: Art Therapy Relational Neuroscience Trauma Treatment Principles and Guidelines. In *Art Therapy, Trauma, and Neuroscience* (1st ed.). Routledge.
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- Hinz, V. B. L., Lisa D. (2021). The Expressive Therapies Continuum as a Framework in the Treatment of Trauma. In *Art Therapy, Trauma, and Neuroscience*. Routledge.
- Kagin, S. L., & Lusebrink, V. B. (1978). The expressive therapies continuum. *Art Psychotherapy*, 5(4), 171–180. [https://doi.org/10.1016/0090-9092\(78\)90031-5](https://doi.org/10.1016/0090-9092(78)90031-5)

- King, J. L. (2018). Summary of Twenty-First Century Great Conversations in Art, Neuroscience and Related Therapeutics. *Frontiers in Psychology, 9*, 1428. <https://doi.org/10.3389/fpsyg.2018.01428>
- King, J. L., Kaimal, G., Konopka, L., Belkofer, C., & Strang, C. E. (2019). Practical Applications of Neuroscience-Informed Art Therapy. *Art Therapy, 36*(3), 149–156. <https://doi.org/10.1080/07421656.2019.1649549>
- Lelièvre, M., Delpech, L., & Sudres, J.-L. (2025). Alexithymie et créativité des patients cancéreux. Implémenter le modèle transactionnel, intégratif et multifactoriel (TIM). *Annales Médico-psychologiques, 183*(2), 136–143. <https://doi.org/10.1016/j.amp.2024.03.007>
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- Lusebrink, V. (2014). Art Therapy and the Neural Basis of Imagery: Another Possible View. *Art Therapy, 31*(2), 87–90. <https://doi.org/10.1080/07421656.2014.903828>
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- Malhotra, B., Jones, L. C., Spooner, H., Levy, C., Kaimal, G., & Williamson, J. B. (2024). A conceptual framework for a neurophysiological basis of art therapy for PTSD. *Frontiers in Human Neuroscience*, 18, 1351757. <https://doi.org/10.3389/fnhum.2024.1351757>
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Research Methodologies

Lelièvre, M., Delpech, L., & Sudres, J.-L. (2024). « Sens et motions » : apports d'un soin de support art-thérapeutique en oncologie. Une analyse mixte dans le cadre d'une étude exploratoire. *Canadian Journal of Art Therapy*, 37(2), 157–169.

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Meta Analysis/ Systematic / Scoping/ Mini Reviews

Bokoch, R., Hass-Cohen, N., Espinoza, A., O'Reilly, T. & Levi, E. (2025). A scoping review of integrated arts therapies and neuroscience research. *Frontiers in Psychology*. <https://www.frontiersin.org/articles/10.3389/fpsyg.2025.1569609>

Beerse, M. E., Van Lith, T., Pickett, S. M., & Stanwood, G. D. (2020). Biobehavioral utility of mindfulness-based art therapy: Neurobiological underpinnings and mental health impacts. *Experimental Biology and Medicine*, 245(2), 122-130.

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Griffith, F. J., & Bingman, V. P. (2020). Drawing on the brain: An ALE meta-analysis of functional brain activation during drawing. *The Arts in Psychotherapy*, 71,

101690. <https://doi.org/10.1016/j.aip.2020.101690>

Malik, S. (2022). Using neuroscience to explore creative media in art therapy: A systematic narrative review. *International Journal of Art Therapy*, 27(2), 48-60.

<https://doi.org/10.1080/17454832.2021.1998165>

Moezzi, S., Korostynska, O., Rankanen, M., Khan, H., & Gazerani, P. (2026). Art therapy and emotional pain: A scoping review of physiological and biological measures. *Frontiers in Human Neuroscience*, 20, 1736930.

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Experimental Research

Physiological measurements (e.g., heart rate variability [HRV]; cortisol level; blood glucose; skin conductance)

Czamanski-Cohen, J., Galili, G., & Allen, J. J. B. (2020). Examining Changes in HRV and Emotion Following Artmaking with Three Different Art Materials. *JoVE (Journal of Visualized Experiments)*, 155, e60376. <https://doi.org/10.3791/60376>

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Rankanen, M., Leinikka, M., Groth, C., Seitamaa-Hakkarainen, P., Mäkelä, M., & Huotilainen, M. (2022). Physiological measurements and emotional experiences of drawing and clay. *The Arts in Psychotherapy*, 79, 101899. <https://doi.org/10.1016/j.aip.2022.101899>

EEG/qEEG

- Belkofer, C. M., & Konopka, L. M. (2008). Conducting art therapy research using quantitative EEG measures. *Art Therapy: Journal of the American Art Therapy Association*, 25(2), 56-63. <https://doi.org/10.1080/07421656.2008.10129412>
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- Kang, S-J., Pei, C-Z., Lee, D-H., Ha, J-E., & Baek, K-H. (2023). A pilot randomized clinical trial of biomedical link with mental health in art therapy intervention programs for alcohol use disorder: Changes in NK cells, addiction biomarkers, electroencephalography, and MMPI-2 profiles. *PLoS ONE*, 17(5), 1–22. <https://doi.org/10.1371/journal.pone.0284344>.
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fMRI

Walker, M.S., Stamper, A. M., Nathan, D. E., & Riedy, G. (2018). Art therapy and underlying fMRI brain patterns in military TBI: A case series. *International Journal of Art Therapy*, 23(4), 180-187. <https://doi.org/10.1080/17454832.2018.1473453>

fNIRS

Kaimal, G., Ayaz, H., Herres, J., Dieterich-Hartwell, R., Makwana, B., Kaiser, D. H., & Nassar, J. A. (2017). Functional near-infrared spectroscopy assessment of reward perception based on visual self-expression: Coloring, doodling, and free drawing. *The Arts in Psychotherapy*, 55, 85-92. <https://doi.org/10.1016/j.aip.2017.05.004>

Art Therapy for Neurorehabilitation

Batubara, S. O., Saragih, I. D., Mulyadi, M., & Lee, B.-O. (2023). Effects of art therapy for people with mild or major neurocognitive disorders: A systematic review and meta-analysis. *Archives of Psychiatric Nursing*, 45, 61–71.

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Cognitive Neuroscience / Neuropsychology / Other Disciplines: Research on Art Making, Creativity

EEG

Bhattacharya, J., & Petsche, H. (2005). Drawing on mind's canvas: Differences in cortical integration patterns between artists and non-artists. *Human Brain Mapping, 26*(1), 1-14. <https://doi.org/10.1002/hbm.20104>

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fMRI

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Gowen, E., & Miall, R. C. (2007). Differentiation between external and internal cuing: An fMRI study comparing tracing with drawing. *Neuroimage*, 36(2), 396-410.

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Perspectives & Reviews

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<https://doi.org/10.1016/B978-0-444-63287-6.00002-6>

Fetz, E. E. (2012). Artistic explorations of the brain. *Frontiers in Human Neuroscience*, 6, 9. <https://doi.org/10.3389/fnhum.2012.00009>

Pepperel, R. (2018). Art, energy, and the brain. *Progress in Brain Research*, 237, 417-435. <https://doi.org/10.1016/bs.pbr.2018.03.022>

Trojano, L., Gross, D., & Flash, T. (2009). Cognitive neuroscience of drawing: Contributions of neuropsychological, experimental, and neurofunctional studies. *Cortex*, 45(3), 269-277. <https://doi.org/10.1016/j.cortex.2008.11.015>

Zaidel, D. W. (2010). Art and brain: Insights from neuropsychology, biology, and evolution. *Journal of Anatomy*, 216(2), 177-183.
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