

The Creative Brain: How Arts Rewire and Heal the Mind

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WEBINAR ON CULTURE AND HEALTH

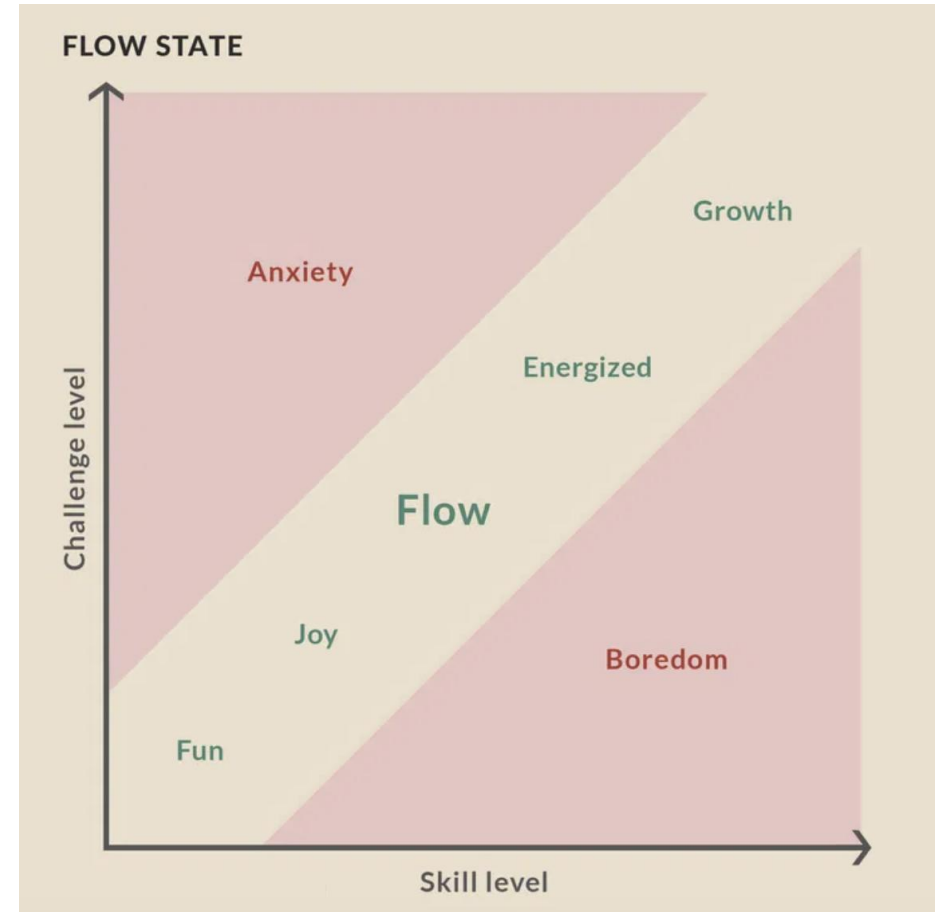
**“THE ROLE OF CREATIVE ARTS
IN PROMOTING MENTAL WELLNESS”**

Wednesday 13 May 2026 | 11.00 - 13.00 EEST



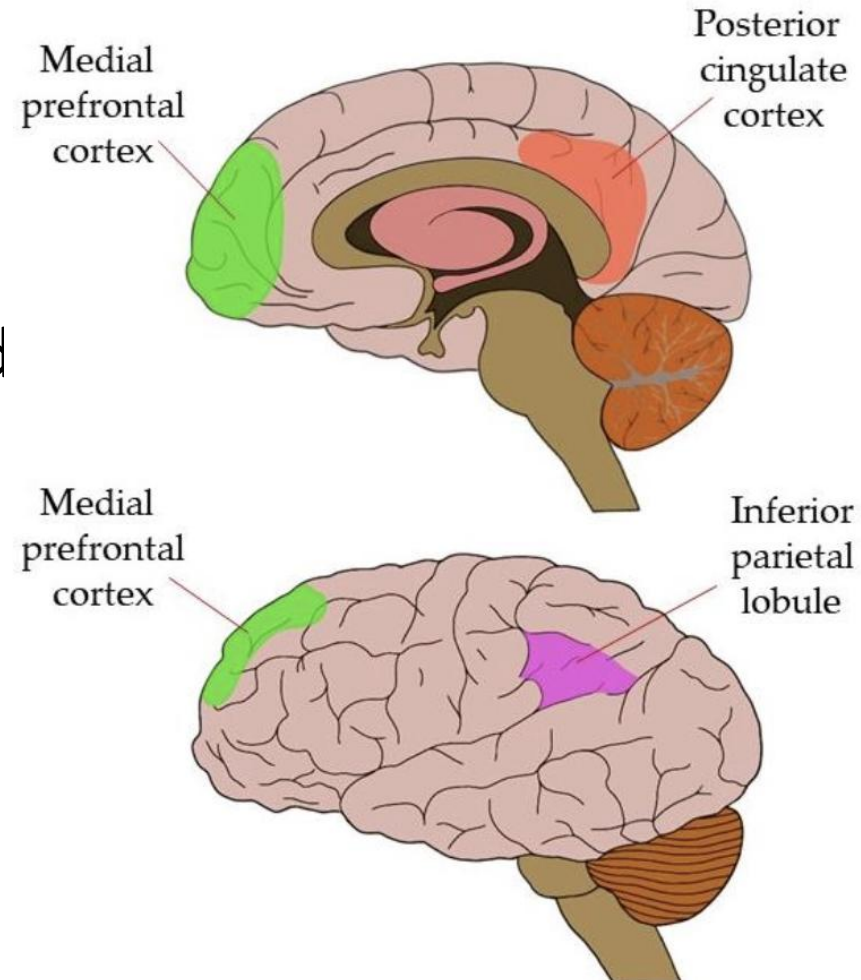
Biopsychosocial model (1990)

- “Flow” theory (Csikszentmihalyi, 1990)
 - A state of deep, immersive engagement that is intrinsically rewarding and linked to well-being
 - Core psychological mechanism in artistic practice



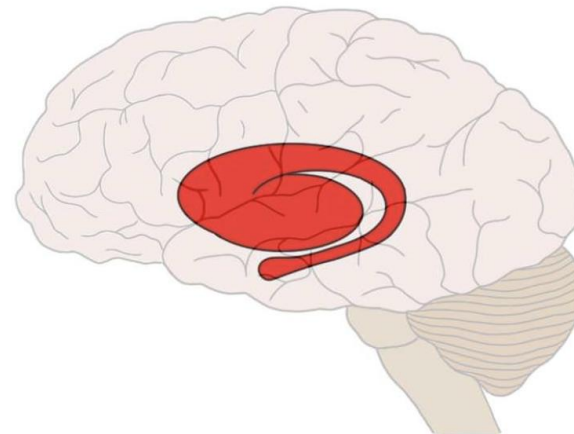
The Default Mode Network

- Active during rest, self-referential thought, and introspection (Raichle et al., 2001)
- Profoundly engaged and modulated by arts-based activities



Music, Dopamine, and Reward

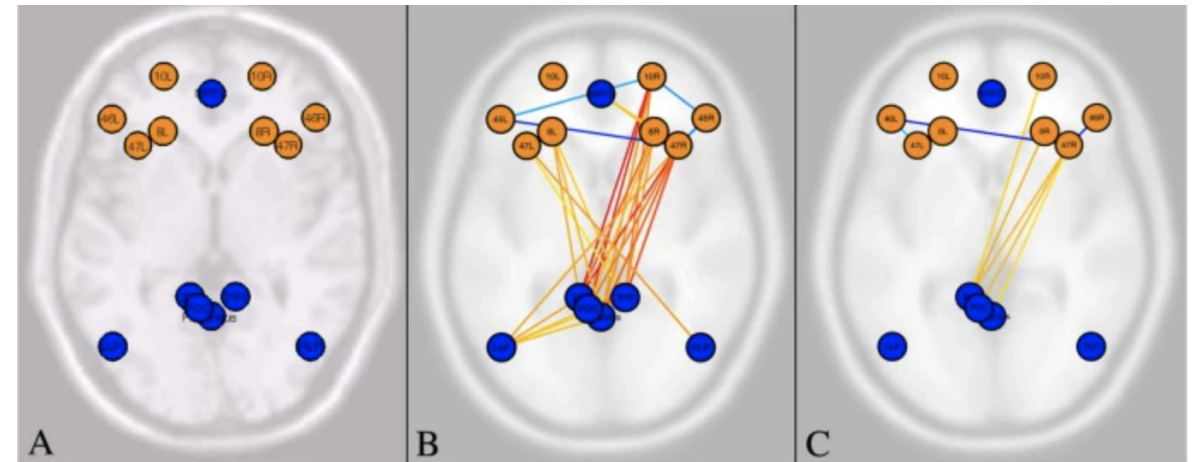
- Nature Neuroscience
- Anatomically distinct dopamine release during anticipation and experience of peak emotion to music (Salimpoor et al., 2011)
- Direct evidence that pleasurable music listening triggers **dopamine release** in the brain's reward pathways (i.e., striatum)



Visual Arts & Brain Connectivity

- Studies examining effects of visual art production on functional brain connectivity and stress (Bolwerk et al., 2014)
- Creating visual art (e.g., drawing, painting) enhances **functional connectivity** in the brain's DMN and between prefrontal and other cortical regions, suggesting it promotes integrative brain states and cognitive resilience

Brain networks for visual creativity: a functional connectivity study of planning a visual artwork



Pisapia et al., 2016

Music-Making and Social Bonding

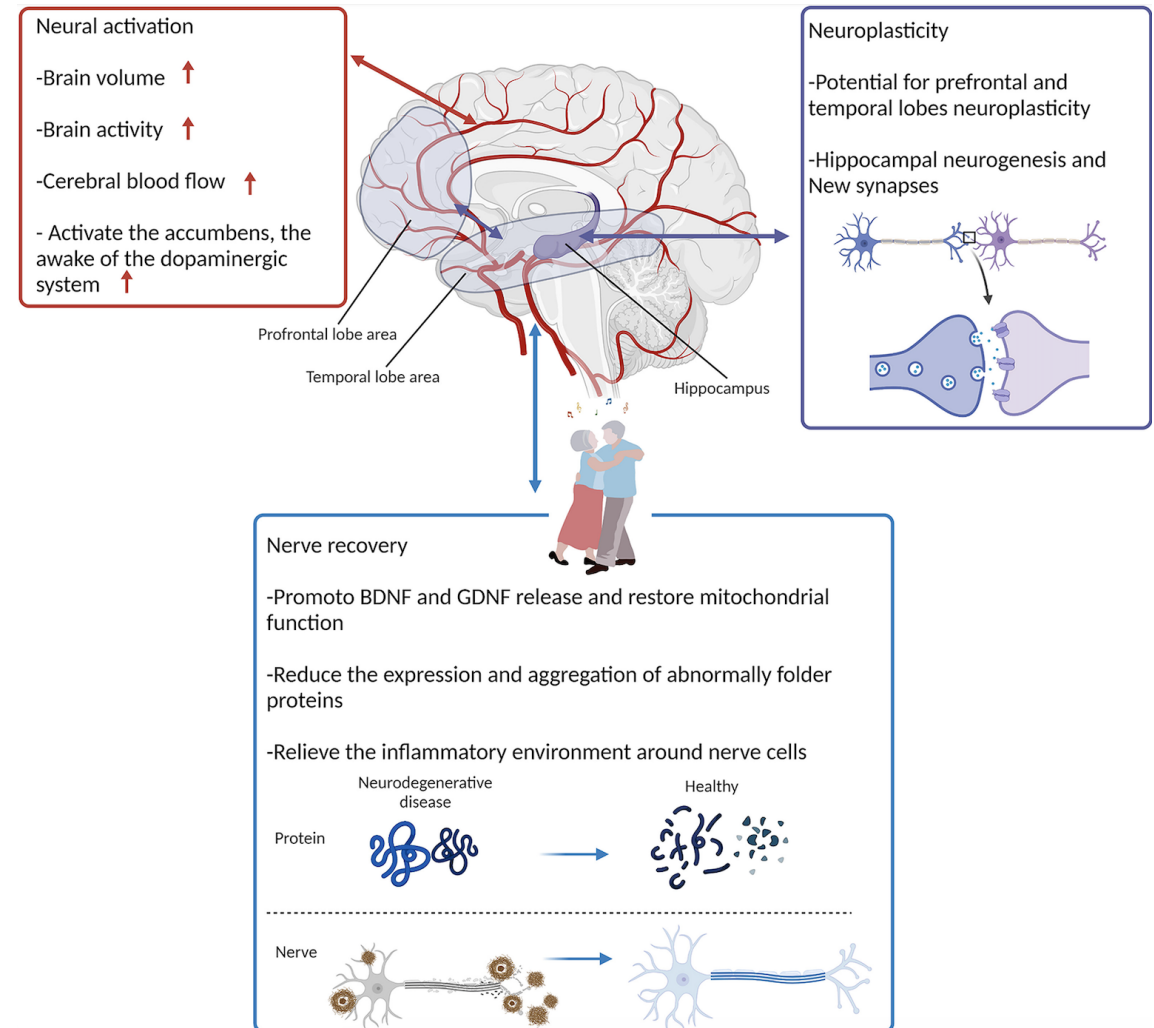
- Shows that synchronized group singing or drumming leads to **inter-brain synchrony** and **correlated cortisol levels** among participants
(Pearce et al., 2021)
- Provides a neural and physiological basis for art's role in building social cohesion and reducing feelings of isolation



(DisobeyArt / Shutterstock.com)

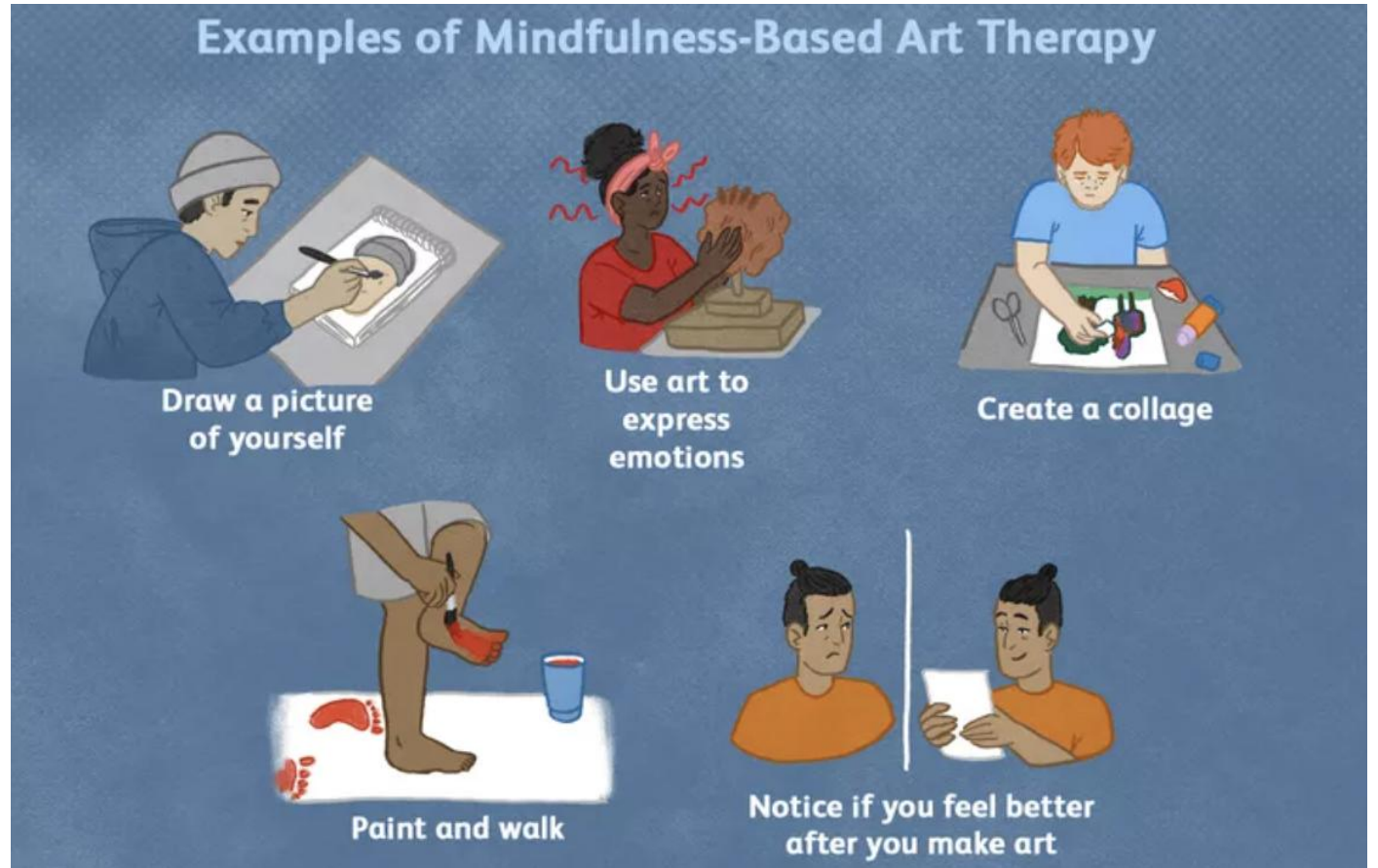
Dance Therapy & Neuroplasticity

- Dance, combining music, movement, and emotional expression, has been shown to induce **neuroplastic changes** in motor and cognitive brain regions (e.g., hippocampus, basal ganglia), improving motor function, memory, and mood in clinical populations (Teixeira-Machado et al., 2022)



Mindfulness-Based Art Therapy (MBAT) & the Amygdala

- Recent fMRI studies on MBAT for anxiety (e.g., work by Donna Betts)
- Combining mindfulness with art-making shows **downregulation of amygdala activity** (the brain's fear center) and **strengthened connectivity** between the prefrontal cortex and amygdala, indicating improved emotion regulation.



Cultural Arts as Embodied Resilience

- Indigenous practices
 - Beading and carving (Hatala et al., 2020)
 - Weaving (Lelaulu et al., 2021)
- African and African diaspora practices
 - Drumming and dance (Bittman et al., 2018)
 - Quilting (Williams & Lewis, 2023)
- Asian practices
 - Calligraphy and mindfulness (Kato & Furukawa, 2019)

Anatolian Art Forms & Well-Being

- Ebru (Marbling) and Mindfulness (Ak & Lajunen, 2020)
- Tezhip (Illumination) & Hat (Calligraphy) for Cognitive Focus (Sargin & Ozcan, 2019)
- Sufi Music & Rituals (Yuksel & Senormanci, 2018; Cetinkaya et al, 2020)
 - Sema & Ney (heart rate variability)
- Kilim and Chini (Erdem & Kocaman, 2021)
- Folk Music (Demir, 2022)
- Humor in Narrative Therapy (Aydin, 2023)
 - Nasreddin Hoca
 - Reframe cognitive distortions

Turkish Art Forms & Well-Being

- Collective *zikir* (remembrance) and brain synchronization (Istanbul University)
 - Preliminary findings suggest inter-brain synchrony among participants during rhythmic *zikir*, similar to findings from group singing or drumming
 - This neural coupling is hypothesized to underpin the profound feelings of unity, belonging, and transcendence reported by participants.



Conclusions

- Robust evidence that arts-based interventions can help meet major health challenges and reduce reliance on medical services
- Sufficient evidence to support the role of arts in prevention, treatment, and management of mental and physical illness across the lifespan
- Cultural art forms are not complementary...they are often primary vehicles for psychological processing and healing
- Offer a culturally coherent syntax and outlet for expressing and diminishing stress
- Must integrate arts into public health policy

Thank you

