EUROPEAN CONSORTIUM OF ARTS THERAPIES EDUCATION
ECArTE
18TH EUROPEAN ARTS THERAPIES CONFERENCE
8-11 SEPTEMBER 2026
PULA, CROATIA

Playfulness in Creative Arts Therapies: Its Effects and Neurophysiological Mechanisms

משחקיות בטיפול באומנויות: ההשפעות שלה והמנגנונים

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Playfulness stands at the heart of the creative arts therapies, grounded in spontaneity, creativity, imagination, and shared experience. Playful interactions take place within a ritual framework that defines the sequence and repetitions of events and the roles of each participant. Within this safe space, participants can explore freely, step outside routine roles and predictable patterns, and co-create new meanings together.

This presentation focuses on playful interactions in visual arts, dance movement, and drama. In a series of studies with more than 150 younger and older adults, we examined the psychological and neurophysiological effects of different forms of improvised playful interactions: improvised role-play and dramatic enactment, movement improvisation, and improvised drawing through squiggle games. Each of these playful interactions is framed within a clear ritual structure, yet within this framework there is full freedom for endless forms of expression and spontaneous creation that emerge through interaction between participants. Playful sessions were compared with more routine control activities, including exercise classes, coloring tasks, and introductory conversations.

Findings show that playful interactions enhance cognitive functioning, positive affect, and shared experience. Physiological indicators reveal heightened arousal during play, suggesting a neurobiological rhythm of social engagement and renewal. We propose that the repetitions within the playful space balance spontaneity with safety, strengthening the sense of connection and allowing new discoveries to emerge. These experiences heighten positive arousal and vitality.

In a complementary neuroimaging study using fMRI, we found that playful environments, grounded in safe rituals and shared experience, yet infused with novelty and unpredictability, activate regions of the salience network, supporting exploratory behavior and adaptive engagement across the lifespan.

These findings underscore the importance of playful interactions in creative arts therapies, where the repetitive and ritualized structure creates a safe environment that fosters exploration, curiosity, novelty, and deeper interpersonal connection.

Biography

Shoshi Keisari, PhD, is Associate Professor at the University of Haifa, directs the Drama Therapy and Psychodrama Graduate Program. She is also a researcher with the *Center for Research and Study of Aging*, the *Emili Sagol Creative Arts Therapies Research Center*, and the *Drama and Health Science Lab* at the University of Haifa.

Her research investigates playfulness and its neural mechanisms, drama therapy across the lifespan, playback theatre, and arts-based approaches for aging. Her studies are supported by the Israel Science Foundation and the National Science Foundation NSF–BSF.

Gaya Balin-Shany is a drama therapy student at the University of Haifa and the coordinator of the ISF-funded project Playfulness: Drama, Cognition, and Brain. Within this project, she has been involved in research on playfulness across the lifespan, including studies with youth, adults, and older adults. Gaya facilitates improvisation workshops and performs as an actress in a theatre program addressing sexual protection for children and adolescents. She is currently completing her clinical internship in family and dyadic therapy, with a focus on complex trauma.

Recent Publications

Golland, Y., Ben-David, B.M., Mather, M., & Keisari, S. (2025). **Playful brains: A possible neurobiological pathway to cognitive health in aging.** *Frontiers in Human Neuroscience, 19*, 1490864.

Keisari, S., Krueger, K.R., Ben-David, B.M., & Hainselin, M. (2024). **New horizon in improving ageing with improvisational theatre**. *Age and Ageing, 53*(5), afae087.

Keisari, S., Feniger-Schaal, R., Palgi, Y., Golland, Y., Gesser-Edelsburg, A., & Ben-David, B. (2022). **Synchrony in old age: Playing the mirror game improves cognitive performance.** *Clinical Gerontologist*, 45(2), 312-326.