Prospective Article ISSN 2693-2490

Journal of Psychology and Neuroscience

When We Create, The Brain Responds

Dr. Shilpa Jasubhai (PhD)

Consultant Clinical Psychologist, Ahmedabad, Gujarat, India.

***Corresponding Author**
Dr. Shilpa Jasubhai,
Consultant Clinical Psychologist, Ahmedabad, Gujarat, India.

Submitted: 22 Jun 2026; **Accepted:** 1 Jul 2026; **Published:** 8 Jul 2026

Citation: Jasubhai, S. (2026). When We Create, The Brain Responds. *J Psychol Neurosci; 8*(4):1-4. DOI : https://doi.org/10.47485/2693-2490.1167

Abstract

Music has long been recognised for its influence on learning, memory, emotion, and human functioning. The Brain Makes Music, a documentary by Dr. Ashit Sheth, explores the relationship between music and the human brain, illustrating how musical experiences engage cognitive, emotional, and neural processes. These insights invite a broader consideration: if music can influence so many aspects of human functioning, might other forms of creativity offer comparable benefits through different pathways?

This perspective article examines whether activities such as painting, drawing, sculpting, knitting, gardening, writing, and other creative pursuits contribute to attention, memory, emotional regulation, and psychological well-being. Drawing on research from psychology, neuroscience, art therapy, and creativity studies, the article considers creativity as more than a leisure activity or artistic pursuit. Particular attention is given to its potential role in learning, memory, emotional expression, stress reduction, and the experience of flow. The article argues that creative engagement may represent an important yet often overlooked contributor to cognitive functioning, psychological well-being, and human flourishing across the lifespan.

Keywords: Creativity, Art-Making, Learning, Memory, Emotional Regulation, Flow, Psychological Well-Being.

Introductions

Music has long been recognised as a powerful human experience that extends beyond entertainment. Research has shown that musical engagement influences attention, memory, emotion, learning, and social connection (Hallam, 2010; Patel, 2011). These findings have contributed to growing interest in understanding how creative experiences shape cognitive and psychological functioning.

The Brain Makes Music, a documentary by Dr. Ashit Sheth, explores the relationship between music and the human brain, illustrating how musical experiences engage cognitive, emotional, and neural processes. By bringing together insights from neuroscience, psychology, and music research, the documentary highlights the remarkable ways in which music can influence learning, memory, emotion, and well-being.

Inspired by the ideas presented in the documentary, this article extends the discussion beyond music to consider whether other forms of creative engagement may offer similar benefits. Activities such as painting, drawing, sculpting, knitting, gardening, writing, and other forms of creative expression have been part of human life across cultures and generations. Yet their potential contributions to cognition, learning, and psychological well-being have received comparatively less scientific attention than those associated with music.

The question is not whether art affects the brain in exactly the same way as music. Rather, it is whether creativity, expressed through sound, colour, movement, words, or form, supports learning, memory, emotional regulation, and psychological well-being through different but complementary pathways.

Drawing on research from psychology, neuroscience, art therapy, and creativity studies, this perspective article examines creativity as more than a leisure activity or artistic pursuit. Particular attention is given to its potential role in learning, memory, emotional expression, stress reduction, and the experience of flow. The article argues that creative engagement may represent an important, yet often overlooked contributor to cognitive functioning, psychological well-being, and human flourishing across the lifespan.

Creativity as a Whole-Person Experience

Creativity does not appear to reside within a single region of the brain. Contemporary research suggests that creative thought emerges through interactions among multiple cognitive and emotional systems (Dietrich & Kanso, 2010). Perception, memory, attention, emotion, imagination, and motor activity all contribute to the act of creating.

Research indicates that artistic activities engage multiple neural systems simultaneously. Visual artmaking involves processes associated with perception, attention, planning,

movement, memory, emotion, and reward (Chatterjee, 2014; Dietrich & Kanso, 2010). Emerging work in neuroaesthetics further suggests that creating and experiencing art engages networks involved in emotional evaluation, meaning-making, and subjective well-being (Chatterjee & Vartanian, 2016). Rather than functioning independently, these processes interact in complex ways during creative engagement, reflecting the integrated nature of artistic experience.

Different creative activities may place varying demands on these systems. Drawing and painting rely heavily on visual-spatial processing, observation, and motor coordination. Sculpting and pottery additionally engage tactile and sensory processing through direct interaction with materials. Creative writing draws upon language, memory, imagination, and emotional expression, while activities such as knitting, weaving, and gardening combine motor sequencing, attention, planning, and sensory engagement.

Importantly, these activities do not involve isolated functions operating independently. Instead, they reflect dynamic interactions among multiple neural networks that support perception, action, emotion, and cognition. This broad engagement may help explain why creative activities are often experienced as immersive, meaningful, and psychologically restorative.

The significance of creativity therefore lies not only in the finished product but also in the experience of creating itself. When individuals paint, sculpt, garden, write, or knit, the activity rarely engages only one aspect of functioning. Thoughts, emotions, memories, sensory experiences, and physical actions become intertwined in a dynamic process. Through creative engagement, individuals are encouraged to observe, reflect, experiment, and interact actively with the world around them.

Creativity, Learning, and Memory

One reason music has attracted considerable scientific interest is its apparent influence on learning, memory, and cognitive functioning. Research suggests that musical engagement contributes to language development, auditory processing, attention, and memory, although these relationships are shaped by multiple biological and environmental factors (Hallam, 2010; Patel, 2011). Music is also widely used as a learning aid, with rhythm, melody, repetition, and emotional engagement thought to support the encoding and retrieval of information.

This raises an important question: can visual art and other creative activities offer similar benefits?

Although art and music engage different sensory systems, both involve the integration of attention, memory, perception, emotion, and meaning-making. Drawing, painting, sculpting, building, and other forms of creative expression require observation, decision-making, problem-solving, and the transformation of ideas into tangible forms. Through these processes, individuals engage multiple cognitive systems simultaneously.

Creative activities may be particularly valuable during childhood because they encourage visual-spatial reasoning, symbolic thinking, planning, fine motor coordination, and cognitive flexibility. Through drawing, painting, building, sculpting, and imaginative play, children learn to experiment, solve problems, and represent ideas in new ways. These experiences foster curiosity and exploration while helping children organise thoughts, make connections, and adapt to new situations. Rather than passively receiving information, children become active participants in the learning process, engaging cognitive, sensory, and emotional systems simultaneously. Such experiences may contribute not only to creative development but also to broader aspects of learning, self-expression, and intellectual growth.

The potential benefits of creative engagement may extend beyond childhood. Research examining visual art participation suggests that sustained involvement in creative activities may contribute to cognitive flexibility, reflective thinking, and adaptive problem-solving, capacities that are increasingly recognised as important for learning and lifelong cognitive health (Bolwerk et al., 2014).

The relationship between creativity and memory becomes especially interesting when considering how information is encoded. When individuals sketch diagrams, create mind maps, colour-code concepts, or draw representations of information, they engage visual, motor, attentional, and semantic systems simultaneously. One of the most compelling findings in this area is the drawing effect. Wammes et al. (2016) found that information is remembered more effectively when individuals draw it rather than simply write it down. Drawing appears to strengthen memory because it encourages deeper processing and requires individuals to reconstruct information in a meaningful visual form.

Creative activities may also support learning indirectly by reducing psychological distress that can interfere with attention and memory. Stress and anxiety can impair concentration and limit the effective encoding of information. Kaimal et al. (2016) reported reductions in cortisol levels following art-making, suggesting a physiological pathway through which creative engagement may contribute to concentration, learning, and psychological well-being.

While art may not influence the brain in precisely the same manner as music, both provide rich opportunities for cognitive engagement and development. Music often supports learning through auditory and emotional pathways, whereas art engages visual, spatial, motor, and imaginative processes. Together, they illustrate how creative experiences can support learning, memory, emotional regulation, and human development across the lifespan.

Creativity as a Language of Emotion

Not every emotional experience can be easily expressed through language. Grief, uncertainty, hope, joy, longing, and frustration often extend beyond the limits of words. Creative

expression offers an alternative means of communication through colour, shape, texture, movement, and symbolism. In this way, creativity can serve not only as a form of expression but also as a way of exploring and making sense of emotional experience.

This may help explain why artistic expression has long been incorporated into therapeutic practice. Creative activities can facilitate emotional exploration, self-awareness, and psychological healing (Malchiodi, 2020). Through the creative process, individuals may communicate experiences that are difficult to articulate, gain new perspectives on personal challenges, and develop a deeper understanding of themselves. Importantly, the benefits of creative engagement do not depend on artistic skill or formal training. The value often lies in the process rather than the outcome. Whether through painting, drawing, sculpting, gardening, or other forms of making, creativity provides an opportunity to engage with experience, reflect on emotions, and construct personal meaning.

Creativity is often associated with galleries, exhibitions, and professional artists, yet some of its most meaningful forms occur in everyday life. Doodling provides a useful example. Frequently dismissed as a mindless activity, doodling may help sustain attention and improve recall. Andrade (2010) found that participants who doodled while listening to information remembered more than those who did not. Beyond memory, simple creative acts may encourage moments of reflection and mental engagement during otherwise passive activities.

The same principle may apply to colouring, journaling, knitting, arranging flowers, decorating living spaces, or tending plants. Although these activities may appear ordinary, they can create opportunities for focus, reflection, and emotional restoration. Creativity does not always emerge through grand artistic achievements or exceptional talent. More often, it is woven into everyday acts of making that help individuals slow down, connect with their experiences, and cultivate a sense of meaning, calm, and renewal.

Flow, Movement, and Well-Being

Many artists describe becoming so absorbed in the creative process that awareness of time begins to fade and external distractions recede. Whether working with paint, clay, textiles, wood, or other materials, creators often report a state of deep concentration and engagement that resembles what Csikszentmihalyi (1990) termed flow. Characterised by focused attention, intrinsic satisfaction, and immersion in the present moment, flow allows thought, emotion, and action to become closely integrated.

Although achieved through activity rather than stillness, flow shares important characteristics with meditation, including sustained attention, reduced distraction, and heightened awareness of the present moment. Emerging research suggests that highly engaging creative activities may increase absorption in the task at hand while reducing attention to external concerns, contributing to the sense of timelessness frequently described during creative work (Chatterjee & Vartanian, 2016). For many individuals, creative engagement therefore becomes more than a means of expression; it offers a way of cultivating presence and temporarily stepping away from everyday concerns.

Flow experiences have been associated with enjoyment, intrinsic motivation, and psychological well-being, suggesting that creative activities may contribute to fulfilment and personal growth (Csikszentmihalyi, 1990).

Creativity is also deeply connected to movement and sensory engagement. Activities such as painting, pottery, gardening, knitting, woodworking, and other forms of making require coordinated physical action alongside attention, planning, and problem-solving. Research suggests that physical activity can positively influence attention, memory, mood, and overall brain health (Ratey, 2008). Although creative pursuits may not be considered exercise in the traditional sense, they often involve purposeful movement and ongoing interaction with the environment.

The Brain Makes Music, the documentary that inspired this article, highlights the intimate relationship between creativity and action. Musicians do not simply listen to music; they create it through coordinated sensory, cognitive, emotional, and motor processes. Similarly, artists, gardeners, craftspeople, and writers engage both mind and body in the creative act. This integration of thinking, feeling, sensing, and doing may help explain why many individuals report feeling calmer, clearer, and more emotionally balanced after periods of creative engagement.

Reconsidering Creativity in Mental Health

Mental health is often discussed in terms of symptoms and treatment, yet well-being also involves meaning, purpose, connection, growth, and opportunities for self-expression. Participation in creative activities has been associated with emotional well-being, resilience, stress reduction, and improved quality of life (Stuckey & Nobel, 2010).

A growing body of evidence further suggests that engagement with the arts can support psychological well-being by providing opportunities for self-expression, reflection, social connection, and meaning-making (Fancourt & Finn, 2019). Creative activities can offer individuals a constructive way to process experiences, explore emotions, and foster a sense of agency and personal growth.

Creativity may therefore be understood not simply as recreation but as a psychological resource that supports overall well-being. While creative engagement is not a substitute for therapy or professional care when needed, it may complement these approaches by providing opportunities for reflection, expression, connection, and restoration.

Conclusion

Human beings have always created. Long before psychology and neuroscience sought to understand why, people painted

cave walls, shaped clay, cultivated gardens, sang songs, and told stories. Creativity has endured across cultures and generations because it fulfils something deeply human.

The literature reviewed in this article suggests that creativity offers more than enjoyment or artistic accomplishment. Through activities such as music, drawing, painting, writing, gardening, and other forms of making, individuals engage attention, memory, emotion, imagination, and sensory experience in ways that support learning, emotional expression, stress reduction, and psychological well-being.

Creativity may therefore be viewed not as an optional luxury but as one of the many ways human beings learn, adapt, connect, and make meaning throughout the lifespan. The Brain Makes Music demonstrates how music engages the brain in remarkable ways. The broader discussion presented here suggests that creativity itself, whether expressed through music, art, writing, gardening, or other forms of making, may represent an important pathway through which individuals learn, grow, heal, and flourish.

When people create, they do more than produce an object or complete a task. The creative process invites exploration, reflection, problem-solving, and engagement with the world. Through creating, individuals organise experience, express emotion, deepen understanding, and discover new possibilities for connection and growth.

In this sense, when we create, the brain responds. Creativity is not merely an artistic pursuit; it is a deeply human process that may contributes to cognitive functioning, emotional well-being, and human flourishing across the lifespan.

References

1. Hallam, S. (2010). The power of music: Its impact on the intellectual, social and personal development of children and young people. *International Journal of Music Education, 28*(3), 269–289. DOI: https://doi.org/10.1177/0255761410370658
2. Patel, A. D. (2011). Why would musical training benefit the neural encoding of speech? The OPERA hypothesis. *Frontiers in Psychology*, 2, 142. DOI: https://doi.org/10.3389/fpsyg.2011.00142
3. Dietrich, A., & Kanso, R. (2010). A review of EEG, ERP, and neuroimaging studies of creativity and insight. *Psychological Bulletin, 136*(5), 822–848. DOI: https://doi.org/10.1037/a0019749
4. Chatterjee, A. (2014). The aesthetic brain: How we evolved to desire beauty and enjoy art. Oxford University Press. https://books.google.co.in/books/about/The_Aesthetic_Brain.html?id=nZi1AQAAQBAJ&redir_esc=y
5. Chatterjee, A., & Vartanian, O. (2016). Neuroaesthetics. *Trends in Cognitive Sciences, 20*(5), 370–375. DOI: https://doi.org/10.1016/j.tics.2014.03.003
6. Bolwerk, A., Mack-Andrick, J., Lang, F. R., Dörfler, A., & Maihöfner, C. (2014). How art changes the brain: Differential effects of visual art production and cognitive art evaluation on functional brain connectivity. *PLoS ONE, 9*(7), e101035. DOI: https://doi.org/10.1371/journal.pone.0101035
7. Wammes, J. D., Meade, M. E., & Fernandes, M. A. (2016). The drawing effect: Evidence for reliable and robust memory benefits in free recall. *Quarterly Journal of Experimental Psychology, 69*(9), 1752–1776. DOI: https://doi.org/10.1080/17470218.2015.1094494
8. Kaimal, G., Ray, K., & Muniz, J. (2016). Reduction of cortisol levels and participants' responses following art-making. *Art Therapy, 33*(2), 74–80. DOI: https://doi.org/10.1080/07421656.2016.1166832
9. Malchiodi, C. A. (2020). Trauma and expressive arts therapy: Brain, body, and imagination in the healing process. Guilford Press. https://www.guilford.com/books/Trauma-and-Expressive-Arts-Therapy/Cathy-Malchiodi/9781462543113?srsltid=AfmBOoomBDVuBaCeeEyNdyCjyy0JZBLG5aFl-55rFl6f7P4Lf4lti0N0
10. Andrade, J. (2010). What does doodling do? *Applied Cognitive Psychology, 24*(1), 100–106. DOI: https://doi.org/10.1002/acp.1561
11. Csikszentmihalyi, M. (1990). Flow: The psychology of optimal experience. Harper & Row. https://www.researchgate.net/publication/224927532_Flow_The_Psychology_of_Optimal_Experience
12. Ratey, J. J., & Hagerman, E. (2008). Spark: The revolutionary new science of exercise and the brain. Little, Brown and Company. https://books.google.co.in/books/about/Spark.html?id=zM_9Ft1j40UC&redir_esc=y
13. Stuckey, H. L., & Nobel, J. (2010). The connection between art, healing, and public health: A review of current literature. *American Journal of Public Health, 100*(2), 254–263. DOI: https://doi.org/10.2105/AJPH.2008.156497
14. Fancourt, D., & Finn, S. (2019). What is the evidence on the role of the arts in improving health and well-being? A scoping review. World Health Organization Regional Office for Europe. https://pubmed.ncbi.nlm.nih.gov/32091683/
15. Wilson, M. (2002). Six views of embodied cognition. *Psychonomic Bulletin & Review, 9*(4), 625–636. DOI: https://doi.org/10.3758/BF03196322