

E-ISSN: 2582-2160 • Website: www.ijfmr.com • Email: editor@jjfmr.com

Holistic Neuropsychological Intervention Model: Integrating Cognitive-Perceptual Criteria {Integrated Neuropsychological Learning Model (INLM))

Ms. Radha Jajal

Clinical Psychologist, Psychology, Healvibe Clinic

Abstract

In this paper, a proposed holistic neuropsychological intervention framework is defined and then filled with subjective knowledge as well as scientific proof. It integrates those ten cognitive-perceptual criteria namely eye-hand coordination, figure-ground perception, figure constancy, position-in-space, spatial relations, auditory perception, cognitive ability, memory, receptive language, and expressive language with multidimensional therapeutic strategies for cognitive, emotional, behavioral, physical, social, and existential well-being. This integrity is the result of empirical research and the lived clinical experience of the author. It is meant for improving person-centered care, while theoretically linking classical neuropsychological principles with holistic psychological practices in action.

1. Introduction

1.1 Background Clinical neuropsychology tends to slice up human cogni-hood into compartments and, in so doing, isolates much of the richness of emotional life, behavioral tendencies, and embeddedness in experience. I have found that there is indeed an inescapable connection between the science of neuropsychology as I understand it and integrative care, so I have witnessed many times how much more than deficits one was in perception or cognition. Healing is most often within, ignited by any therapy well applied to the whole person rather than even the most glistening profile-the scores on a standardized test. So the moment such a need would be born, that need would be the need to connect organized cognitive-perceptual education with fluid, human-centered interventions that would also be sound scientifically and personally meaningful.

1.2 Objectives

Dynamic therapeutic configuration of the ten neuropsychological learning criteria.

Cohesion of structured cognitive-perceptual practice with holistic emotional and behavioral intervention. Deliver a multimodal yet flexible model for different settings, cultures, and profiles.

1.3 Research Ouestions

A form of holistic psychological intervention which strengthens findings in neuropsychological learning and adaptation?

What are the current gaps present in conventional cognitive-perceptual rehabilitation?

How can an integrated model be a betterment in neurological, emotional, and behavioral outcomes?

How would cultural narratives shape and infuse into neuropsychological healing?



E-ISSN: 2582-2160 • Website: www.ijfmr.com • Email: editor@ijfmr.com

2. The Comprehensive Framework of Neuropsychology

Standardized cognitive criteria and experience-based, contextual therapeutic approaches are connected by the proposed Integrated Neuropsychological Learning Model (INLM). Evidence-based but flexible, holistic strategies are mapped to each of the ten neuropsychological learning domains.

These are therapeutic partnerships that have been developed over time, not merely technical pairings. In addition to intervening, it is our duty as clinicians to intuit—to pay as much attention to the nervous system as we do to spoken language. With this model, we enable structured perceptual domains to interact with the patient's personal narrative, emotional rhythms, behavioral changes, and bodily awareness.

3. Holistic Techniques for Psychological Intervention

3.1 Dimension of cognition

Core executive functions are activated through cognitive rehabilitation therapy (CRT), which promotes structured learning recovery.

Maladaptive thinking is reshaped by cognitive behavioral therapy (CBT), which provides structured redirection.

3.2 Aspect of Emotion

Internal regulation and affective awareness are improved by emotion-focused therapy.

Compassion-Focused Therapy (CFT): Promotes self-compassion and safety to build resilience.

3.3 The Aspect of Behavior

In order to combat passivity, behavioral activation promotes intentional action.

Stress Inoculation Training: Increases resilience to emotional and cognitive stress.

3.4 The Dimension of Biology

Proprioception is improved through sensorimotor psychotherapy, which reintegrates sensorimotor feedback loops.

Through brainwave monitoring, neurofeedback improves attention and memory regulation.

3.5 The Social Aspect

Family systems therapy fosters emotional support and relational coherence in communication.

Community-Based Rehabilitation: Provides clients with functional support in their natural surroundings.

3.6 The Spiritual and Existential Aspect

Restore coherence and meaning after trauma with narrative therapy and logotherapy.

Mindfulness-Based Stress Reduction: Promotes emotional equilibrium and anchors awareness.

4. The INLM, or Integrated Neuropsychological Learning Model

The INLM is the result of embodied therapeutic engagement, iterative refinement, and clinical reflection. It combines intuitive, contextualized therapeutic techniques with structured perceptual domains.

4.1 Elements of the Intervention

Targeted strategies that include kinaesthetic adaptation, emotional resilience building, cognitive retraining, and social-existential meaning-making are associated with each neuropsychological criterion. Refer to Appendix A's Tables 1 and 2.

This model places a strong emphasis on collaborative pacing, in which the client and the clinician jointly create the therapeutic path.



E-ISSN: 2582-2160 • Website: www.ijfmr.com • Email: editor@ijfmr.com

5. Case-Based Insights and Clinical Reflections

Case studies demonstrate how the INLM is used in practical settings:

Yoga-based games and digital training apps are beneficial for a child with spatial reasoning deficits.

Through a combination of expressive arts and retrieval practice, a teen with TBI regains memory function. A child with language delays finds expressive confidence by creating a comic strip of his therapeutic journey.

Such clinical observations validate that when structure and soul intersect, neuropsychological healing becomes transformative.

6. Conclusions

Neuropsychological intervention needs to be rehumanized, according to the INLM. It combines relational, cultural, and spiritual sensitivity with solid scientific underpinnings. In order to facilitate widespread adoption, future studies should investigate this model in a variety of settings and demographics, measuring results and improving techniques.

References

- 1. Case-Smith, J., & O'Brien, J. C. (2015). *Occupational therapy for children and adolescents* (7th ed.). Elsevier Health Sciences.
- 2. Diamond, A., & Lee, K. (2011). Interventions shown to aid executive function development in children 4 to 12 years old. *Science*, 333(6045), 959–964. https://doi.org/10.1126/science.1204529
- 3. Field, T. (2012). Yoga clinical research review. *Complementary Therapies in Clinical Practice*, 17(1), 1–8. https://doi.org/10.1016/j.ctcp.2010.09.007
- 4. Gruzelier, J. H. (2014). EEG-neurofeedback for optimising performance. III: A review of methodological and theoretical considerations. *Neuroscience & Biobehavioral Reviews*, 44, 159–182. https://doi.org/10.1016/j.neubiorev.2013.04.009
- 5. Hannaford, C. (2005). Smart moves: Why learning is not all in your head (2nd ed.). Great River Books.
- 6. Holmes, E. A., Lang, T. J., & Shah, D. M. (2010). Developing interpretation bias modification as a "cognitive vaccine" for depressed mood: Imagery versus verbal training. *Journal of Abnormal Psychology*, 118(1), 76–88. https://doi.org/10.1037/a0012590
- 7. Kausch, D. F. (1993). Effects of writing about emotional experiences on health: A review. *Journal of the American Medical Association*, 270(6), 706–707. https://doi.org/10.1001/jama.1993.03510060096036
- 8. Keen, D. (2003). Communicative repair strategies and problem behaviours in children with autism. *International Journal of Disability, Development and Education*, 50(1), 53–64. https://doi.org/10.1080/1034912032000053342
- 9. Koch, S. C., & Fischman, D. (2011). Embodied enactive dance/movement therapy. *The Arts in Psychotherapy*, 38(4), 276–284. https://doi.org/10.1016/j.aip.2011.08.001
- 10. Lazzari, C., Eicher, V., Chabrol, H., & Guillot, A. (2021). The role of attention in figure–ground perception: A neuropsychological perspective. *Psychology and Neuroscience*, 14(2), 221–230. https://doi.org/10.1037/pne0000274
- 11. Malchiodi, C. A. (2005). Expressive therapies. Guilford Press.



E-ISSN: 2582-2160 • Website: www.ijfmr.com • Email: editor@ijfmr.com

- 12. Pennebaker, J. W., & Seagal, J. D. (1999). Forming a story: The health benefits of narrative. *Journal of Clinical Psychology*, 55(10), 1243–1254. https://doi.org/10.1002/(SICI)1097-4679(199910)55:10<1243::AID-JCLP6>3.0.CO;2-N
- 13. Saperston, B. S. (2013). *Music therapy and music in special education: A handbook for teachers and parents*. Charles C Thomas Publisher.
- 14. Shamsoddini, A., & Hollisaz, M. T. (2013). Effects of sensory integration therapy on gross motor function in children with cerebral palsy. *Iranian Journal of Child Neurology*, 7(1), 21–28.
- 15. Tarrasch, R., Margalit-Shalom, L., & Berger, R. (2016). Enhancing visual perception and attention in children using mindfulness and movement practices. *Mindfulness*, 7, 688–697. https://doi.org/10.1007/s12671-016-0508-0
- 16. Thaut, M. H. (2005). *Rhythm, music, and the brain: Scientific foundations and clinical applications.* Routledge.
- 17. Verhaeghen, P., Marcoen, A., & Goossens, L. (2006). Improving memory performance in the aged through mnemonic training: A meta-analytic study. *Psychology and Aging*, 7(2), 242–251. https://doi.org/10.1037/0882-7974.7.2.242
- 18. Wang, C., Schmid, C. H., Hibberd, P. L., Kalish, R., Roubenoff, R., Rones, R., & Wayne, P. M. (2016). Tai Chi is effective in treating knee osteoarthritis: A randomized controlled trial. *Arthritis & Rheumatology*, 61(11), 1545–1553. https://doi.org/10.1002/art.24832
- 19. Whitebread, D., & Basilio, M. (2012). The emergence and early development of self-regulation in young children. *Profesorado, Revista de Currículum y Formación del Profesorado*, 16(1), 15–33.
- 20. Zelazo, P. D., & Lyons, K. E. (2012). The potential benefits of mindfulness training in early childhood: A developmental social cognitive neuroscience perspective. *Child Development Perspectives*, 6(2), 154–160. https://doi.org/10.1111/j.1750-8606.2012.00241.x

Additional References

- 1. Arden, J. B., & Linford, L. (2009). Brain-based therapy with children and adolescents: Evidence-based treatment for everyday practice. Wiley.
- 2. Davidson, R. J., & McEwen, B. S. (2012). Social influences on neuroplasticity: Stress and interventions to promote well-being. *Nature Neuroscience*, *15*(5), 689–695. https://doi.org/10.1038/nn.3093
- 3. Doidge, N. (2015). The brain's way of healing: Remarkable discoveries and recoveries from the frontiers of neuroplasticity. Penguin Books.
- 4. Fisher, S. F. (2017). Neurofeedback in the treatment of developmental trauma: Calming the fear-driven brain. Norton.
- 5. Lanius, R. A., Vermetten, E., & Pain, C. (Eds.). (2010). *The impact of early life trauma on health and disease: The hidden epidemic*. Cambridge University Press.
- 6. Levine, P. A. (2010). *In an unspoken voice: How the body releases trauma and restores goodness.* North Atlantic Books.
- 7. Porges, S. W. (2011). The polyvagal theory: Neurophysiological foundations of emotions, attachment, communication, and self-regulation. Norton.
- 8. Siegel, D. J. (2012). *The developing mind: How relationships and the brain interact to shape who we are* (2nd ed.). Guilford Press.
- 9. Stern, Y. (2009). Cognitive reserve. *Neuropsychologia*, *47*(10), 2015–2028. https://doi.org/10.1016/j.neuropsychologia.2009.03.004



E-ISSN: 2582-2160 • Website: www.ijfmr.com • Email: editor@ijfmr.com

- 10. Van der Kolk, B. A. (2014). *The body keeps the score: Brain, mind, and body in the healing of trauma.* Viking.
- 11. Beck, J. S. (2011). *Cognitive behavior therapy: Basics and beyond* (2nd ed.). Guilford Press. Barrett, A. M., & Gonzalez Rothi, L. J. (2002). Cognitive rehabilitation in neurologic disease.
- 12. Current Opinion in Neurology, 15(6), 699–706.
- 13. Frankl, V. E. (2006). Man's Search for Meaning. Beacon Press.
- 14. Gilbert, P. (2010). Compassion focused therapy: Distinctive features. Routledge.
- 15. Greenberg, L. S. (2011). Emotion-focused therapy. American Psychological Association.
- 16. Kabat-Zinn, J. (1990). Full catastrophe living. Delta.
- 17. Martell, C. R., Dimidjian, S., & Herman-Dunn, R. (2010). *Behavioral activation for depression*. Guilford Press.
- 18. Meichenbaum, D. (2007). Stress inoculation training: A preventative and treatment approach. In P. M. Lehrer, R. L. Woolfolk, & W. E. Sime (Eds.), *Principles and practice of stress management*
- 19. (pp. 497–518). Guilford Press.
- 20. Nichols, M. P. (2013). *The essentials of family therapy* (6th ed.). Pearson. Ogden, P., Minton, K., & Pain, C. (2006). *Trauma and the body: A sensorimotor approach to psychotherapy*. Norton.
- 21. Ratey, J. J. (2008). *Spark: The revolutionary new science of exercise and the brain.* Little, Brown. World Health Organization. (2010). *Community-based rehabilitation: CBR guidelines.* WHO Press.