

Abstract: Psychomotor therapy aims at improving sensory, motor, cognitive and/or psychosocial functions of patients with adaptation difficulties or troubles. The model of cerebral lesions has highlighted that spontaneous or intervention-related behavioral improvements are the result of neuroplasticity, that is, the cerebral reorganizations to adapt to external or internal factors. On one hand, a key factor stimulating neuroplasticity is specific learning leading to acquisition, retention and transfer of sensorimotor, cognitive or psychosocial abilities or strategies through repeated practice in specific conditions. On the other hand, social interactions, physical activities and novel and stimulating situations also represent a real enriched environment, known to stimulate neuroplasticity. Hence, psychomotor therapy can be viewed as a unique opportunity to favor neuroplasticity by combining the effects of specific learning and more general effects of enriched environment. But given that studies on factors and conditions favoring neuroplasticity are conducted in experimental laboratories, it remains know whether effects and conditions are similar in ecological clinical situations. New studies are required to 1) validate evidence-based interventions in psychomotor therapy, 2) unravel the clinical conditions favoring effects and 3) identify the sensorimotor, cognitive, psychosocial processes and cerebral functions and structures participating to the effects. To this aim, collaborations between researchers and psychomotor therapists are encouraged.

Key words: Learning – Enriched environment – Evidence-based practice – Neuroimaging.