Dr. Amit Abraham: Mental imagery and Embodiment in Individuals with Parkinson's disease

Dr. Amit Abraham (Ph.D., MAPty, B.P.T) is a musculoskeletal physical therapist and an Assistant Professor in the Department of Physical Therapy at Ariel University (Israel). Recently Dr. Abraham completed his post-doctoral training at Emory University School of Medicine (USA). This session focuses on the role of mental imagery to improve motor and cognitive functions including body schema.

TOP EMBODIMENT TIP: Visualize your body schema as you move

Mental imagery: **Cognitive process: 1) Real vs Imaginary 2) Previous experiences**
- Offers a new path or opens a window to the body and mind in the same individual
- Examples: Chess game (real), Risk assessment (imagery), Visualize the future (imagery)
- Clinical practices may not always ask patients about specific previous experiences or specific images
- Mental Imagery Affected by: MI Type, Pain, Posture and Body schema
- The Advantages: Low risk for injuries, Minimal fatigue, High availability and Low financial expense

Practice: **Physical Action facilitates brain plasticity in cognitive processes**
- Example in Dance: Cognitive General (learning sequences), Cognitive Specific (learning skills), Motivational General Mastery (increasing self-confidence), Motivational General Arousal (regulating anxiety), Motivational Specific (goal-setting and related behaviors)
- Implement the Franklin Method (Reference B): Dynamic Neuro-Cognitive Imagery which embodies motor, cognitive, psychological and imagery (i.e. Anatomical Models and Specific Visual Aids)

Neural Activity: **Overlaps between mental imagery and physical actual performance**
- Visual mental imagery activates the superior parietal and occipital lobes.
- Kinesthetic (feelings and sensations) activates the motor cortex, inferior parietal lobe, and cerebellum
- Parkinson Disease participants improved their gait and disease severity in 2 weeks (Reference A)

Resources
- ❖ **References A:** https://scholar.google.com/citations?hl=en&user=3kvU6KQAAAAJ
- ❖ **References B:** https://franklinmethod.com

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