Presented in Partial Fulfillment of the Master of Science in Occupational Therapy degree, Thomas Jefferson University

Objectives of Presentation:
1. **Explain** the role of metacognition in everyday activities
2. **Discern** the quality of evidence regarding metacognitive strategies in adults who have sustained a stroke.
3. **Conceptualize** a metacognitive intervention to utilize within stroke rehabilitation based on the evidence presented in this session.

**PICO:** What is the evidence for the impact of metacognitive interventions on occupational performance in adults who have sustained a stroke?

**Methods:**
- **Databases Searched:** CINAHL, PubMed, and additional articles selected through a “hand search” using Google Scholar
- **Search terms utilized:** *MeSH = Medical Subject Headings
  - Stroke*
  - Rehabilitation*
  - Cognition*
  - Self Regulation
  - Self Monitoring
  - Metacognition
  - Mental Practice
  - Self Awareness
  - Executive Function
  - Task Performance

**Articles found and reviewed:**
- Out of 1007 total articles gathered using pre-specified research criteria and limitations, **16 articles qualified** to be retained for further review.

**Methods used for article analysis:**
- Levels of Evidence I-IV - Law & MacDermid’s Appendix N: Evaluation of Quality of an Intervention Study Checklist

**Results:**
The themes are identified based on the evidence gathered:

1. **Mental Practice Interventions** (n=10)
   - Audiotape/script (n=6) 5,21,22,23,24,25 **Moderate evidence** to support use of audiotape/script to improve occupational performance in patients with chronic UE hemiparesis
   - Visually Guided (n=2) 17, 28 **Mixed evidence** for interventions for improved task performance via visually guided mental practice
   - Embedded (n=1) 4 **Insufficient evidence** to support embedded mental practice to improve daily task performance
   - Mixed (n=1) 6,21,22,23,24,25 **Insufficient evidence** to support the use of mixed mental practice to improve task performance in adults with UE hemiparesis

2. **External Feedback Interventions** (n=6)
   - a. Prospective (Cognitive Orientation to Occupational Performance: CO-OP) (n=4) 8, 18, 19, 26 **Moderate evidence** to support CO-OP interventions to improve occupational performance
   - b. Retrospective (self regulation) (n=2) 14, 16
     - Two Types: video feedback & direct attention training
     - **Limited evidence** to support self-regulation

**Implications for the future:**

**Practice:**
- Utilize clinical judgement to select patients in practice
- Daily intervention is beneficial if using mental practice and self-regulation
- Audiotape delivery of mental practice

**Research:**
- Location of stroke and its effect on metacognitive abilities
- Best measures of self-awareness
- Efficacy of combined mental practice and external feedback strategies
• Use of more advanced technology to deliver mental practice (i.e. apps)

Education:
• Greater emphasis on metacognition in curriculum
• Development of mental practice/motor imagery protocol for students to learn
• Development of continuing education course for practitioners


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