

# Effective Interventions for Dementia: Lessons From Montessori and Neuroscience

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Center for Applied  
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Creating effective memory interventions

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# Adult Populations

- CVA
- TBI
- DD/MR
- Progressive Disorders
  - Parkinson's Disease
  - Dementias

# Types of Cognitive Impairment

- Memory Disorders
  - Short Term Memory
  - Long Term Memory
- Executive Dysfunction
- Attention Disorders
- Language Disorders

# DECLARATIVE MEMORY

- Episodic memory
  - past events, autobiographical information
- Semantic memory
  - world knowledge, concepts, vocabulary

**CAN retrieve some information through appropriate cueing.**

# PROCEDURAL MEMORY

## PRESERVED ABILITIES IN DEMENTIA

- Habits
- Location learning/Environmental Cueing
- Motor learning
- Classical condition
- Repetition priming
  - The ability to improve performance after initial exposure to information

# SPACED RETRIEVAL

- Based on Procedural Memory
- A form of repetition priming
- Practice at successfully recalling information over progressively longer intervals of time

# TYPES OF GOALS FOR SR TRAINING

## FACT RETRIEVAL / NAMING

- Names of Family
- Name of Facility
- Names of Objects (Assistive Devices)

## STRATEGY LEARNING

- Drink when prompted
- Safe Transfer
- ADLs



# Swallowing Goals

- Chin Tuck to prevent aspiration
- Clearing Pocketing
- Alternative Solids and Liquids

# COMPENSATORY TECHNIQUE

- “If you can’t think of the name of something I want you to describe it. What do you do if you can’t think of the name of something?”
- “I should describe it.”

# DRESSING TECHNIQUE

- “Put your shirt sleeve on your right arm first. What is the first step for putting on your shirt?”
- “My right arm first.”

# Fall Prevention

# After Hip Replacement

# HELPFUL HINTS

- Let the client choose the information
- Teach concrete information, not abstract
- Number of intervals will vary
- Limit errors
- Teach one thing at a time
- Practice techniques while verbalizing the information

# SUGGESTIONS

- Ask client to write the information
- Allow client to read information when asking the question if necessary
- Pair a motor movement with the verbal response
- Gradually fade the visual cue

# First-in/Last out Model of Cognitive Losses in Dementia

- Assumes that in later stages of dementia, cognitive abilities are lost in REVERSE order they were acquired in childhood
- Examples are based on Piagetian theory and staging
  - OBJECT PERMANENCE
    - Appears in first year of life
    - Is maintained late into the course of dementia



# MONTESSORI-BASED PROGRAMMING

- Based on the work of Maria Montessori
- Planned in sequences  
(Based on First-In/Last Out Model)
- Uses CUEING to access spared components of Declarative Memory

# Montessori-based Tasks

- USE EVERYDAY MATERIALS
- PROVIDES
  - Structure and order
  - immediate feedback
  - high probability of success
  - repetition
  - task break down

# Montessori-based Tasks

- UTILIZE PROCEDURAL MEMORY
  - Skills
  - Habits
  - Motor learning
  - Repetition priming
  - This is similar to  
“UNCONSCIOUS LEARNING”  
in Montessori’s work

# PARALLELS: Montessori-Based Activities & Rehabilitation

- Circumvent deficits
- Allow independent functioning
- Engage in meaningful activity
- Provide feedback and success
- Enhance self-esteem
- Let function at highest possible level
- Provide meaningful social roles

# Montessori-based Activities Related to OT/PT Goals

- Range of motion
- Fine and gross motor skills
- Eye-hand coordination
- Use of tools
- Grip exercises
- Self-care

# Montessori-based Activities Related to SLP Goals

- Categorization
- Word finding
- Reminiscence
  - Access long-term memory
  - Stimulate language usage
- Reading
- Using cues -- verbal and visual

# Memory Bingo

# Reading Activity



# A Different Visit

# Dissemination Strategies

- Train-the-Trainer Model
- Create Corporate Training Program
- Use Family Members to Deliver Programming
- Use Home Health Workers to Deliver Programming
- Tie to Issues Relevant to Administrators

# The Social Life Template™

## Current Approaches

One activity at a time  
provided

Topics of outside speakers  
determined by staff

New residents welcomed  
by staff

## Helen's Place Approach

Multiple activities  
available at any time

Outside speakers chosen  
and invited by residents

New residents welcomed  
by residents

# The Social Life Template™

## Current Approaches

Staff provide  
entertainment

Focus on the facility

Provide care to residents

Hotel model

## Helen's Place Approach

Residents select entertainment,  
and can provide their own  
entertainment

Opportunities to engage with a  
larger social network and the  
world

Allow residents to take care of  
themselves as much as possible

Community model