Rehabilitation for your brain: Strategies to optimize cognition and communication in Parkinson’s disease

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January 31, 2019
Agenda

Provide an overview of:

- The role of the SLP in PD
- Cognitive changes associated with PD
- Other factors that affect cognition
- Descriptions of cognitive processes
- Tools and strategies for cognitive changes
SLP Role in PD

- Cognition
- Communication (Language and Speech)
- Voice
- Swallow
Cognition in PD

• Incidence:
  – 20-57% of people with PD experience cognitive impairment.
Cognitive Difficulties in PD

• Present in some or all of these areas:
  o Speed of Processing
  o Complex Attention
  o Memory
  o Executive Functions
  o Speech and Language

• Time of onset varies from one person to another

• Severity can range from mild (hardly noticeable) to severe (significantly impacts daily functioning)
Factors Which Make Cognitive Function Worse

• Medication
• Pain
• Poor sleep
• Low Mood / Depression
• Stress / Anxiety
• Overstimulation / Distraction
Cognitive (Thinking) Pyramid

Executive Functions
(Organization, Planning, and Problem Solving)

New Learning

Memory

Attention

Speed of Processing

Energy

Pain  Sleep  Illness/Injury  Balance/Vision  Nutrition  Stress  Mood  Activity  Meds
Speed of Processing

Definition: the speed at which someone takes in information, processes it, and responds to it.

In PD, slowed processing speed may result in:

• Taking longer to complete tasks
• Delays in response time
• Taking longer to make a correct judgment about visual stimuli
Speed of Processing Strategies

• For people with PD, ask others to:
  o Slow down
    ✓ Can you slow down?
  o Repeat
    ✓ Would you repeat that?
  o Say one thing at a time
    ✓ Can you say one thing at a time?
  o Ask for info in writing
    ✓ Could you write that down for me?
Speed of Processing Strategies

• For caregivers and family:
  o When giving instructions:
    ✓ Say one thing at a time
    ✓ Write down more complex or multi-step instructions
  o Allow extra time for responses
Attention

- **Sustained**: ability to focus attention for a period of time to complete a single task (e.g., reading a book).

Complex attention deficits are well-documented in PD.

- **Selective**: ability to maintain attention in presence of internal or external distractions (e.g., listening to your spouse in a loud restaurant).

- **Alternating and Divided**: shifting attention between two or more tasks or activities (e.g., reading a recipe and preparing a meal, walking and talking).
Attention Strategies

• Aim for a non-distracting environment when focus is required
  o Eliminate distractions and reduce clutter
  o Do difficult tasks when you are most alert
• Do one thing at a time whenever possible
• Use self-talk
• Set reasonable goals and make time for breaks
Memory

• **Short-term memory:**
  o Holds info for 30-45 seconds

• **Long-term memory:**
  o Remembering experiences from years ago or knowing how to do things (e.g., how to make coffee)

• **Working memory:**
  o Holding onto info and manipulating it (e.g., mental math, remembering what you want to say when someone else is talking)

• **Prospective memory:**
  o Remembering tasks you need to complete in the future (e.g., taking medications, appointments)
Memory Strategies

• Write it down
  o Appointments, to-do lists, grocery lists, notes from phone calls, questions for doctors

• Use visual reminders
  o Post-it notes or other small signs can cue you to do something you may otherwise forget

• Medications
  o Use alarms and a pill box -- www.epill.com

• Use a “memory shrine”
  o Designate one place to keep important items like keys, wallet, purse, glasses
**Weekly October Planner**

**Sunday**
- meet Sallie in cafe
- rearrange toy closet
- Costco
- laundry
- clean bathrooms

**Monday**
- cancel subscription
- return Nordstrom order
- clean office area

**Tuesday**
- carpool round
- pick up plants from Ashley
- kids' dentist @ 4
- burritos recipe presentation
- request textbook

**Wednesday**
- library day
- call babysitter
- File taxes
- update COS account
- Take recycling out

**Thursday**
- schedule ortho appt
- buy Pampers
- pay babysitter $20
- RENT DUE!!!

**Friday**
- confirm photographer
- Dance 4:15 - 5:30
- Cambridge Plaza Event

**Saturday**
- Photo session @ 10
- carnival round the corner
- Shopping
- Set up guest room

**Notes:**

*Family Photo Session at beach!!!!*

- borrow fedora
- leave house at 8
- we are all wearing white!!! no exceptions. Jay!"
Executive Functions

• The “CEO” of our brain
  o Planning
  o Organization
  o Problem-solving
  o Time management
  o Inhibition

• Working memory and complex attention are key components of executive functions
Executive Function Strategies

• Stick to a consistent daily routine
• Have a daily plan
  o Calendar + short to-do list
• Break down larger tasks into individual steps
  o Set the goal
  o Create checklist of steps needed to reach goal
Communication

- Communication difficulties in PD include:
  - Difficulty following complex commands
  - Word retrieval difficulties
  - Organizing thoughts in conversations
Factors Which Make Communication Worse

• Feeling rushed
• Distraction
• Stress
• Fatigue
• Low mood/depression
• Illness
Communication Strategies

• Organize communication ahead of time
  o 3x5 card in pocket with bullet points
  o Write down questions before appointments or phone calls

• Keep it simple and allow yourself time

• Go someplace quiet to talk; eliminate distractions

• Ask people to slow down or repeat what they say
Tips for Communication Partners

• Give the “gift of time” – do not rush to respond
• Get the other person’s attention before you start speaking
• Introduce one topic at a time
• Use active listening – paraphrase for clarity
• Have an empathetic attitude – this will reduce stress and help your loved one communicate
Communication Tips

• Educate others (family, friends) about ways to help communication by developing scripts:
  o For family members and friends:
    ✓ “_____ is learning to optimize life with communication changes in PD. Group conversations are difficult. Please talk with him one-on-one.”
  o For non-familiar communication partners:
    ✓“_____ has Parkinson’s disease. Please be patient with his speech.”

• Communication is 35% verbal, 65% nonverbal
  o Educate others about Masking in PD
Speech & Voice Changes in PD

• Speech changes in PD – hypokinetic dysarthria:
  o Decreased loudness level
  o Increased rate of speech
  o Short rushes of speech
  o Repeated sounds in words

• Lee Silverman Voice Treatment (LSVT)
  o Intensive voice treatment program - 16 sessions in 4 weeks
  o Focuses on increasing vocal loudness
Other Considerations for Cognition and Communication

• You can make a difference in the course of your disease by what you choose to do!
  o Cardiovascular exercise
  o Social interaction
    ✓ Volunteer, join a spiritual group, sing, lectures
  o Cognitive stimulation
    ✓ No single “right” mental exercise
    ✓ Puzzles, playing cards or games, reading, going to lectures, learning a new activity
    ✓ Social interactions are an important piece of mental stimulation
Q & A

• Thank you for inviting me here to speak today!
• Contact me with additional questions:
  – knikris@ohsu.edu