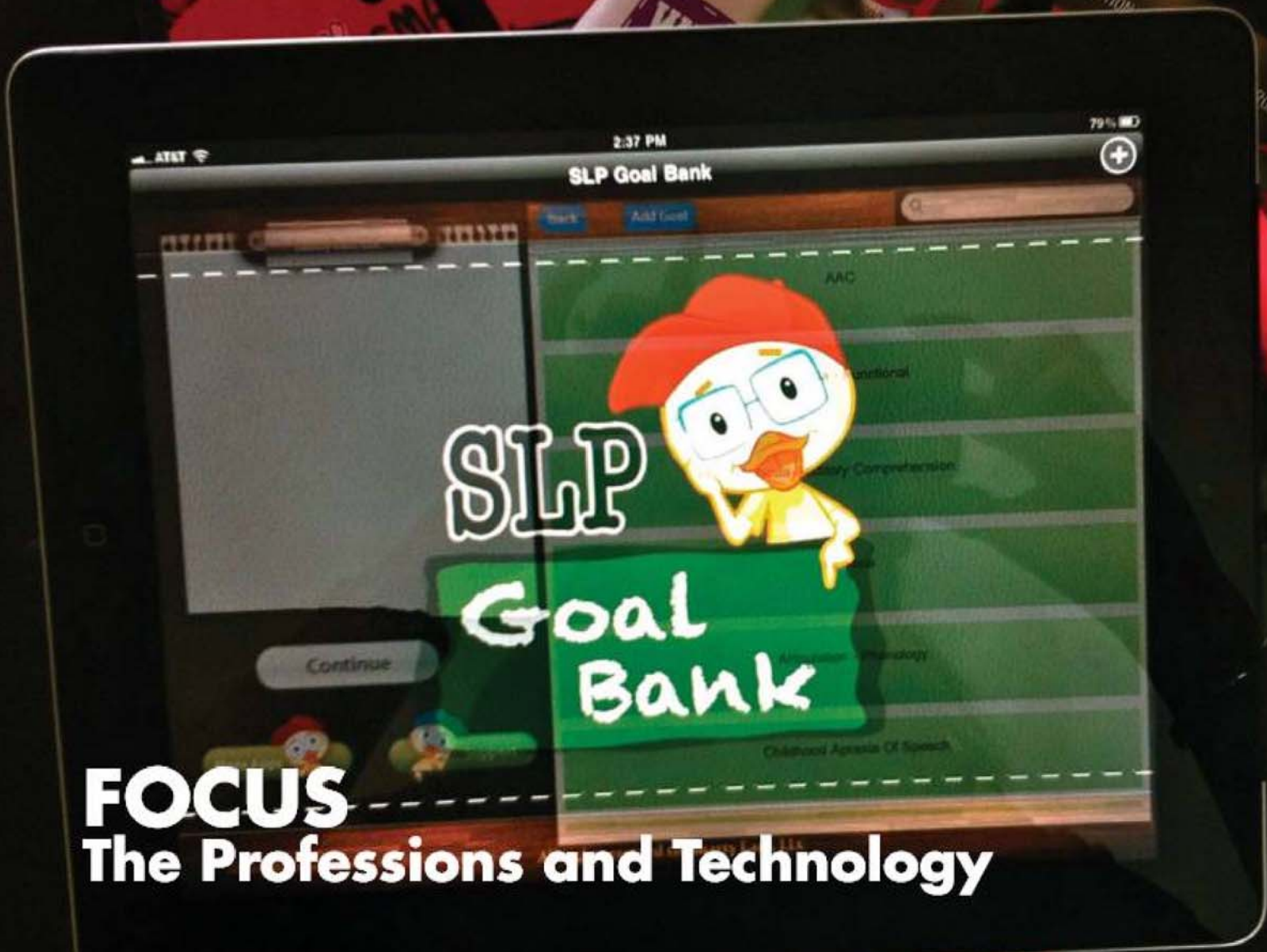


The Canadian Association of
Speech-Language Pathologists
and Audiologists



COMMUNIQUÉ

SPRING 2011



FOCUS
The Professions and Technology

FEATURES
The King and I; May Month

How Cognitive Changes Affect Communication in Parkinson's Disease

BY AVRIL ROBERTS

FOR FURTHER INFORMATION CONTACT
PARKINSON SOCIETY CANADA
GENERAL.INFO@PARKINSON.CA

People with Parkinson's disease (PD) experience subtle cognitive-linguistic changes right from the start. In fact, for approximately five per cent of people, cognitive changes precede the onset of motor symptoms. While mild cognitive impairment and dementia are common in PD, cognitive-linguistic changes that affect communication in daily activities may occur, even in the absence of dementia. These deficits may affect all areas of language, including comprehension and expression in both verbal and nonverbal domains.

These are just some of the insights that are emerging from new research into the non-motor aspects of PD. The goal of this work is to understand the specific nature of cognitive-linguistic impairment in PD in order to guide clinical interventions for assessing and enhancing communication in clients with PD.

Key research in this area is being undertaken by CASLPA member Angela South, a speech-language pathologist and PhD student in the communication sciences and disorders field of the Health and Rehabilitation Sciences Program at the University of Western Ontario in London, Ontario. Her work includes the study of cognitive-linguistic deficits in PD from both clinical and neuroimaging perspectives and the impact these deficits have on the communication dynamic between individuals and their family care partners. This work may assist speech-language pathologists in improving communication outcomes across the continuum of PD. South's research is funded, in part, by a graduate student award from Parkinson Society Canada.



Researchers Angela South (right) and Jacob Penner in the MRI Research Suite at the Roberts Research Institute, University of Western Ontario.

Cognitive-linguistic impairment in PD

- **Attention difficulties.** Because they have difficulty filtering out non-salient information, people with Parkinson's may have trouble communicating in environments with multiple distractions or in conversations with multiple speakers. This may affect comprehension of information and the ability to take in a large volume of information.
- **Complex syntax.** Difficulty processing and producing complex syntax structures both in written and auditory presentation and difficulty making inferences can affect conversation and reading in functional tasks. As a result, people with PD may use simplified sentence structures and less "rich" communication.
- **Memory problems.** Retrieval of information can be more of a problem than encoding of information, so people with PD can benefit from strategies that facilitate retrieval and break information into smaller units.
- **Emotional processing deficits.** There is evidence, in PD, that hypomimia is not just a function of rigidity and stiffness in the facial muscles; it has a cognitive component, as well. People have difficulty both expressing and comprehending emotions, particularly negative emotions such as sadness and anger, across multiple modalities, including facial expression, prosodic changes of voice and words relating to emotional concepts. These deficits, in addition to dysarthria, may affect the paralinguistic aspects of communication.
- **Executive function deficits.** These are part of PD from the early stages and may appear as a delayed ability to organize language, integrate information, and identify and modify strategies.
- **Word finding difficulties.** These include problems with generating words in contextual

communication, confrontation naming and generative naming. Verb-specific deficits, more difficulty with verbs than nouns, may also be a feature of PD. These deficits may result in decreased informational content and decreased efficiency, resulting in language that sounds vague or rambling. One person with Parkinson's said, "I find I have to use a lot of words to convey what I'm thinking."

- **Pragmatics (social communication skills) are also impaired.** People may have difficulty with turn-taking, initiating topics, maintaining topics and referencing.
- **Depression and apathy.** Depression and apathy are common in PD and they can reduce cognitive performance. However, South notes, "If someone is slow to communicate and has emotional processing impairments, this may be perceived as depression when it may, in fact, be a function of communication changes related to cognitive-linguistic skills."

Implications for clinical practice

When working with clients with PD, in addition to addressing the motor speech impairment, consideration should be given to cognitive-linguistic impairment that may also be affecting communication.

The assessment of cognitive-linguistic impairment in PD is complex and may require use of a battery of formal and informal measures beyond the standardized "global" language

assessments used in aphasia. Discourse analysis and measures that address communication efficiency, effectiveness and organization are useful.

The complexity of the cognitive-linguistic deficits in PD also warrants the use of focussed assessment tools such as:

- the Discourse Comprehension Test (Brookshire & Nicholas) for testing comprehension,
- An Object and Action Naming Battery (Druks & Masterson), or the
- Action Naming Test (Obler & Albert), as examples of tests that assess verbs;

as well as measures of cognitive-linguistic areas such as the

- Cognitive Linguistic Quick Test (Helm-Estabrooks),
- Psycholinguistic Assessments of Language Processing in Aphasia (Kay, Coltheart & Lesser), or the
- Arizona Battery for Communication Disorders of Dementia (Bayles & Tomoeda).

Interventions should address the communication dynamic of the person with PD and the communication partner.

Cognitive-linguistic deficits may begin early in PD and may be subtle but they do eventually progress both in the presence and absence of PD dementia. Unaware that this can be part of PD, individuals and their communication partners may become frustrated. Educating clients early in the disease and providing ongoing monitoring of communication impairment from both motor and non-motor perspectives can maximize communication quality of life for people with PD.

April is Parkinson's Awareness Month

Parkinson Society Canada has been supporting Canadians living with Parkinson's since 1965.

To find tip sheets for effective communication with people with PD experiencing cognitive-linguistic impairment, visit www.parkinson.ca.