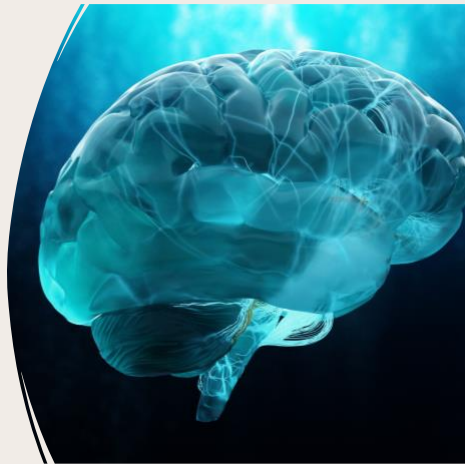# DEMENTIA AND LANGUAGE

Every year more than ten million individuals develop dementia, with almost fifty-five million worldwide now living with dementia.

Dementia is the progressive deterioration of cognitive, linguistic, and social functioning that affects the quality of life, including the physical, social, and economic conditions of individuals, their families, and society.

There are types of dementia depending on the symptoms and underlying pathology.

ALZHEIMER'S DISEASE

VASCULAR DEMENTIA

PARKINSON'S DISEASE

FRONTOTEMPORAL DEMENTIA

MIXED DEMENTIA

LANGUAGE SYMPTOMS

Language symptoms depend on the type of dementia.

Individuals with Alzheimer's Disease (AD) constitute the larger group of individuals with dementia. They are characterized by a progressive deterioration of memory, language, conversation, and ability to perform everyday activities.

Individuals with Primary Progressive Aphasia (PPA), a progressive neurological condition, are impaired in speech and language.

Individuals with PPA are grouped into three variants based on their distinct underlying neuropathology and area of brain damage.

According to current classification criteria, their characteristic neuropathology and damage patterns give rise to different discourse deficits

across three variants, namely in

INDIVIDUALS WITH THE NON-FLUENT PPA VARIANT (NFVPPA)

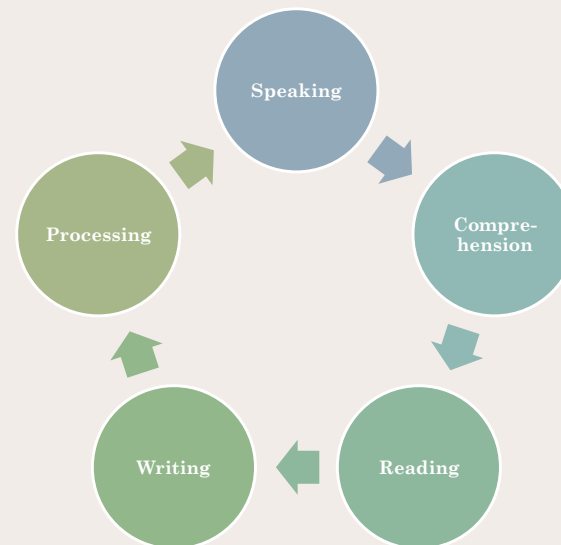INDIVIDUALS WITH THE SEMANTIC PPA VARIANT (SVPPA), AND

INDIVIDUALS WITH THE LOGOPENIC PPA VARIANT (LVPPA)

Individuals with Parkinson's Disease (PD) are characterized by a progressive deterioration of movement functioning, which impairs balance, speaking, language, chewing, and swallowing.

It impairs speech, language, and communication:

- Language comprehension
- Language production of spoken and written language
- Using language effectively for communication.
- It involves deficits in one or more language modalities, including phonetics, phonology, morphology, syntax, semantics, and pragmatics.
- It can also impair aspects of functional communication, e.g.,
  - Emotions self-monitoring
  - Theory of Mind

DEMENTIA DIAGNOSIS

The neurocognitive assessment aims to evaluate individuals' conditions, provide early diagnosis prognosis, and quantify intervention efficacy.

Computational Language Assessment (CLA) informs the clinician and the patient by quantifying the symptoms of dementia on language and enabling monitoring of disease progression over time.

CLA provides tools to screen individuals for dementia and recommends whether to visit a clinician.

Although there is no treatment for dementia, pharmaceutical solutions that can potentially slow down the disease's progression show positive results and are getting approved.

Therefore, early-stage identification and assessment of individuals with dementia are of utmost importance to enable interventions that can delay the progression of dementia and support family planning.

MORE INFORMATION

American Speech-Language-Hearing Association (ASHA): www.asha.org
National Aphasia Association: www.aphasia.org/
Alzheimer's Association: https://www.alz.org

Sickness is an impediment that affects the body, not what you choose to do (…) choose to follow this for all the things that happen to you: because you will realize that it impedes something else and not yourself.

Epictetus

Open Brain AI